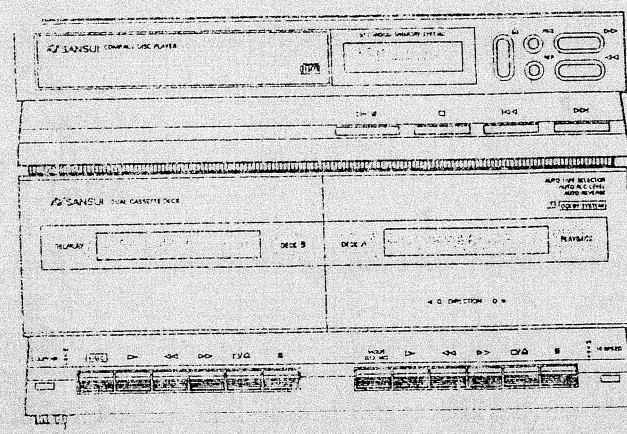
SANSUI

SERVICE MANUAL

MC-1000
MC-1000L

MICRO COMPONENT SYSTEM
<CD & CASSETTE DECK SECTION>

CDD 1000
CDS 100



CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety.
   Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

NOTICE

1. For packing material and accessory parts, see the service manual (TU & AMP Section) of the MC-1000/1000L.
2. Some printed circuit board are not supplied assembled. To separate these in this Parts List, the stock numbers are not indicated for these boards. However, stock numbers for indivisual parts are indicated.
3. Since some capacitors and resistors are omitted from parts lists in this Parts List, refer to the Common Parts List for capacitors and resistors, which was issued on June 1997.
4. Abbreviations in this Parts List are as follows.

Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	M.M.C.	: Metalized Mylar Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Elecrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

Specifications

CD Section

Format	Compact disc, digital audio system
Pick up	3-Beam, semiconductor laser
Frequency response	20 Hz to 20 kHz, ±0.5 dB
Total harmonic distortion	Less than 0.04% (1 kHz)
Signal-to-Noise ratio	Better than 98 dB
Dynamic range	Better than 92 dB
Wow & flutter	Below measurable limit

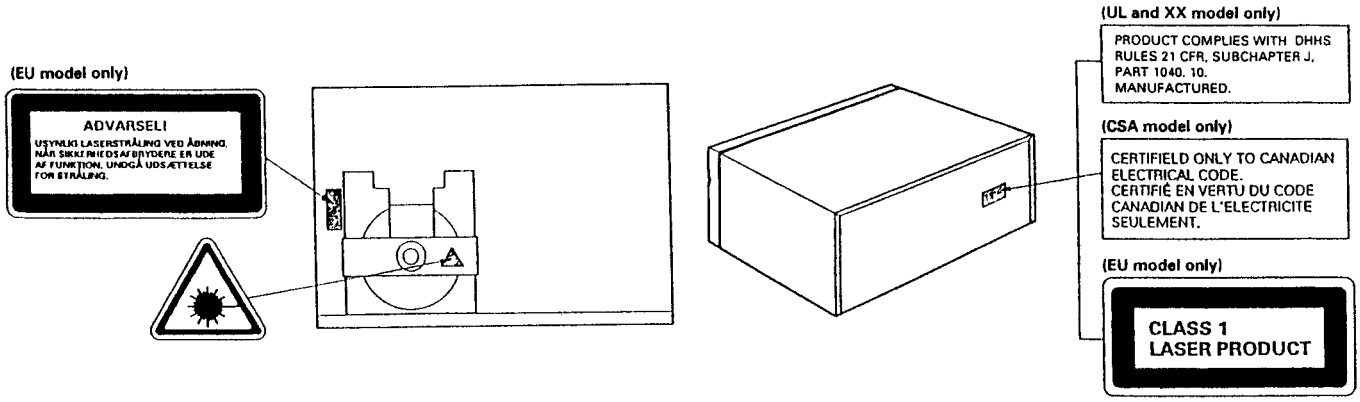
Cassette deck Section

Track format	4-track/2-channel system
Tape speed	4.75 cm/sec.
Wow/flutter	0.1% max (WRMS)
Fast forwarding (rewinding) time	Approx. 150 sec. (for C-60 tape)
Frequency response	
Normal tape (LH)	40 to 14,000 Hz ± 3 dB
Signal-to-noise ratio	
DOLBY NR ON	Better than 60 dB
Dimensions	280 mm (11-1/16") W 135 mm (7-5/16") H 263 mm (10-3/8") D
Weight	4.3 kg (9.5 lbs) net

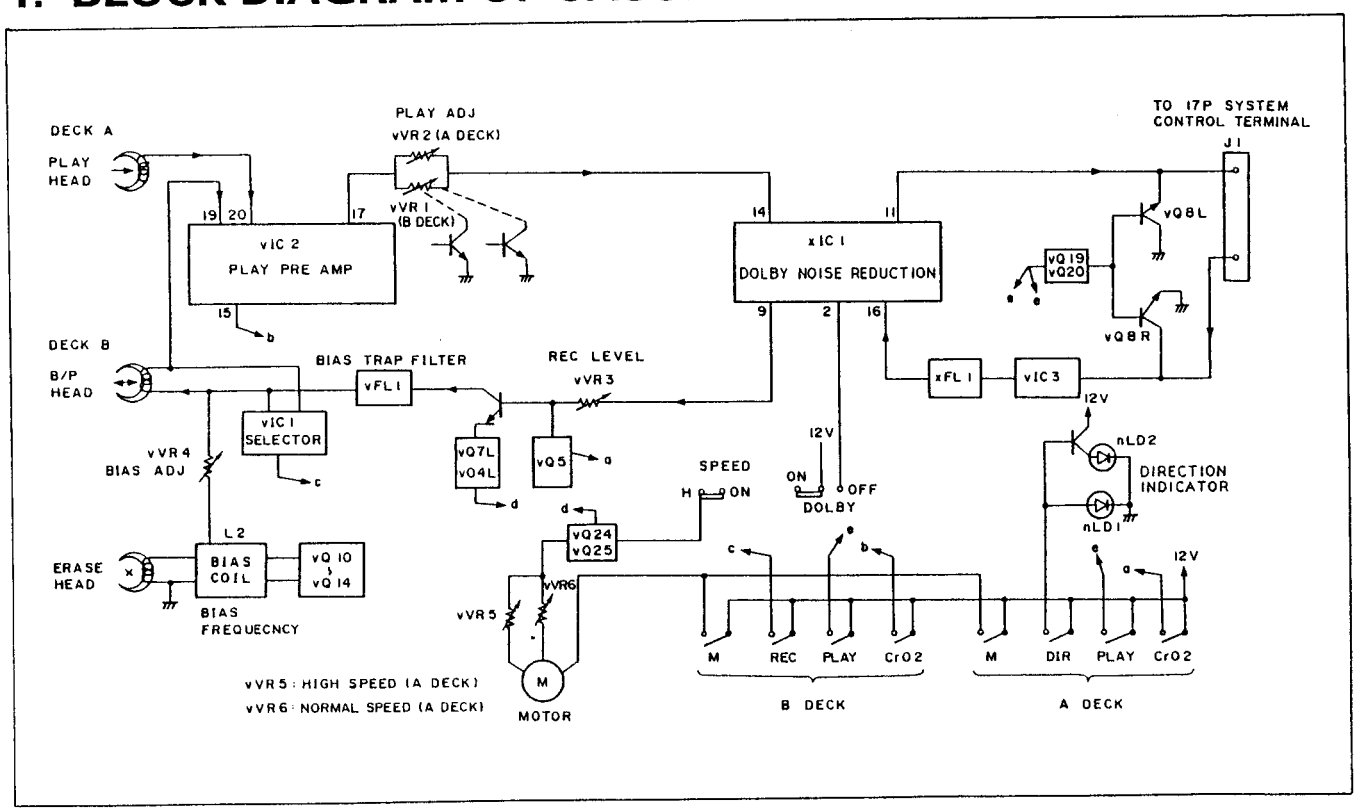
- Design and specifications are subject to changes without notice for improvements.
- Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ◻◻ are trademarks of Dolby Laboratories Licensing Corporation.

Cautions Concerning Handling of The Laser

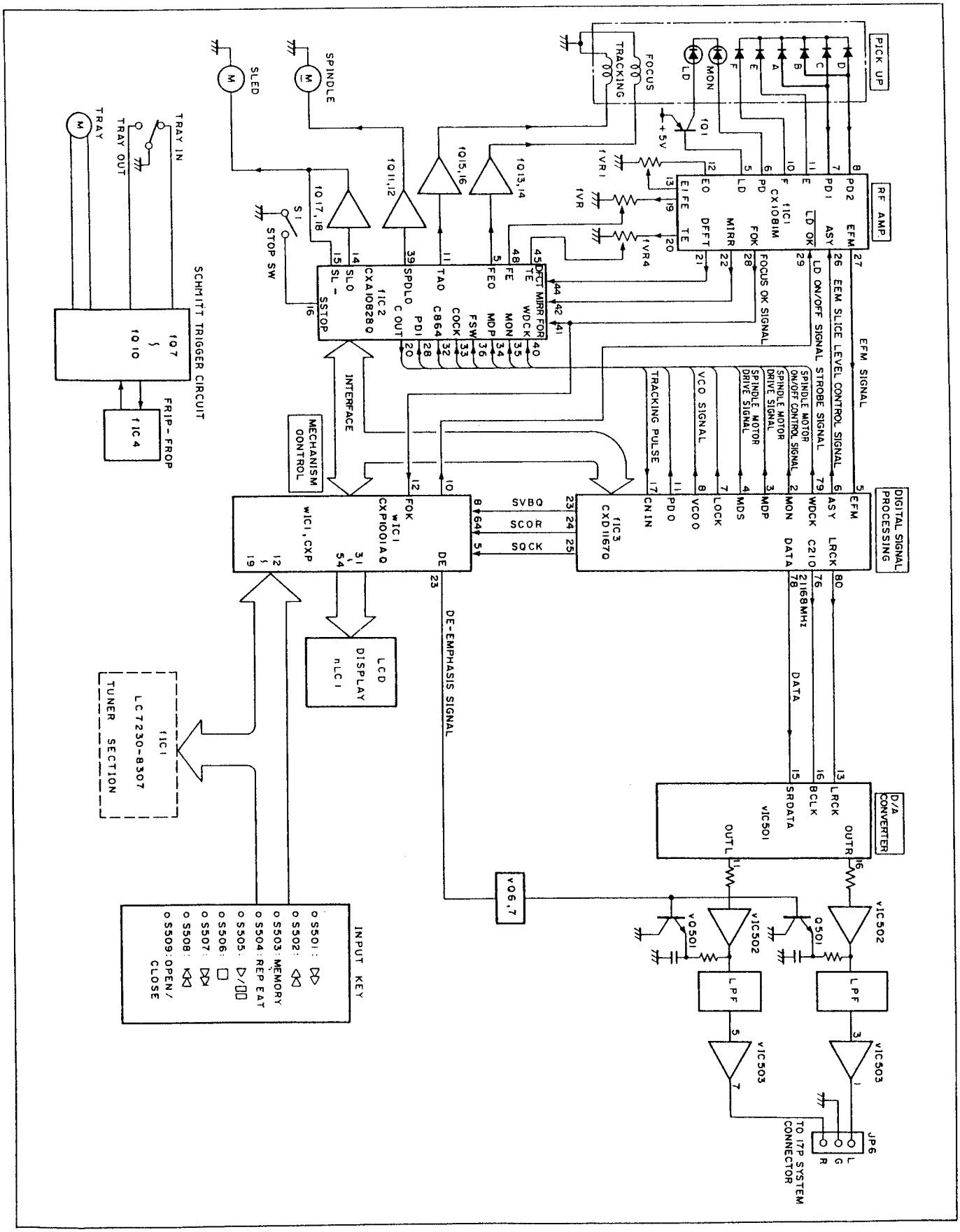
The following label has been affixed to the unit, listing the proper procedure for working with the laser beam.


(EU model only)
ADVARSEL!
USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
(UL and XX model only)
PRODUCT COMPLIES WITH DHHS RULES 21 CFR, SUBCHAPTER J, PART 1040. 10. MANUFACTURED.
(CSA model only)
CERTIFIED ONLY TO CANADIAN ELECTRICAL CODE.
CERTIFIÉ EN VERTU DU CODE CANADIAN DE L'ELECTRICITE SEULEMENT.
(EU model only)
CLASS 1
LASER PRODUCT

1. BLOCK DIAGRAM OF CASSETTE DECK SECTION



2. BLOCK DIAGRAM OF CD SECTION



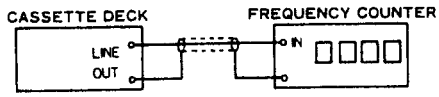
3. ADJUSTMENTS

3-1. Tape Speed Adjustment

- Adjust the tape speed of B-side as fast as A-side.

Note: 1. Use Sansui Test Tape, SCT-S3KL.
(3 kHz signals are recorded on the tape).
2. Connections are shown in Fig. 3-1.

Fig. 3-1



1) Normal Speed Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	A-side Mecha. (NORMAL)	PB L & R Terminal Frequency counter.	Playback the TEST TAPE SCT-S3KL. A-side Mecha.	Turn semi-variable resistor tVR6 on the F-6462 board (A-side Mecha.).	3000Hz ± 10Hz	• See Fig. 3-5 and 3-6.
2.	B-side Mecha. (NORMAL)		Playback the TEST TAPE SCT-S3KL. B-side Mecha.	———	Confirm 3000Hz ±20Hz	

2) High Speed Adjustment

Note: 1. Before this adjustment, regulate "1) Normal Speed Adjustment".
2. Short between hot and GND of TP2 (See Fig. 3-6).

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	A-side Mecha. (HIGH)	PB L & R Terminal Frequency counter.	Playback the TEST TAPE SCT-S3KL. A-side Mecha.	Turn semi-variable resistor tVR5 on the F-6462 board (A-side Mecha.).	6000Hz ± 20Hz	• See Fig. 3-5 and 3-6.
2.	B-side Mecha. (HIGH)		Playback the TEST TAPE SCT-S3KL. B-side Mecha.	———	Confirm 6000Hz ± 40Hz	

3-2. Playback Adjustment

Note: 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K, and SCT-L400.
3. Set the Dolby NR switch to be OFF.
4. Remove the Lid Ass'y.
5. Connections are shown in Fig. 3-2.

Fig. 3-2

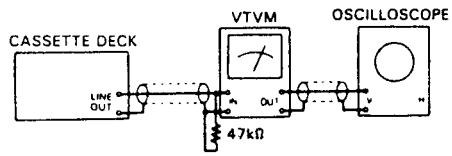
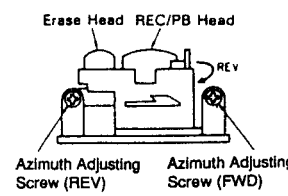


Fig. 3-3



1) A-Side Mecha. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	P.B. Head Adj.	PB L & R Terminal VTVM and Scope.	Playback the TEST TAPE SCT-F10K.	Adjust the azimuth adjusting screw in Fig. 3-3.	MAX. Output both channels on FWD and REV PLAY.	After this adjustment, lock the screw with paint. See Fig. 3-5 and 3-6.
2.	Playback Level Adj.	PB L & R Terminal VTVM and Scope.	Playback the TEST TAPE SCT-L400.	Adjust each vVR2 (L-CH and R-CH, F-6462).	500mV ± 1dB	

2) B-Side Mecha. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	PB L & R Terminal VTVM and Scope.	Playback the TEST TAPE SCT-F10K.	Adjust the azimuth adjusting screw in Fig. 3-3.	MAX. Output both channels on FWD and REV PLAY.	After this adjustment, lock the screw with paint. See Fig. 3-5 and 3-6.
2.	Playback Level Adj.	PB L & R Terminal VTVM and Scope.	Playback the TEST TAPE SCT-L400.	Adjust each vVR1 (L-CH and R-CH, F-6462).	500mV ± 1dB	

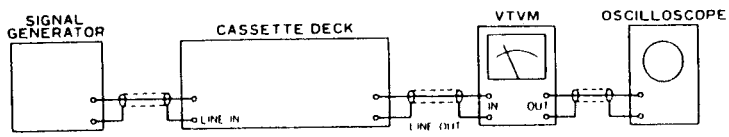
3-3. Bias Adjustment <B-side Mecha. only>

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Bias Frequency Adj.	Between TP3 and GND, AC Volt Meter and Frequency counter.	1. Load the TEST TAPE AC-513. 2. Push the PAUSE button. 3. Push the REC button.	Turn the core of L2.	105kHz ± 5kHz	See Fig. 3-6.

3-4. REC Level & Frequency Response Adjustment <B-side Mecha. only>

Note: 1. Connections are shown in Fig. 3-4.
2. Set the Dolby NR switch to be OFF.
3. Short between TP1 & GND (TP).

Fig. 3-4



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC Level Adj. 1kHz (LCH, RCH)	Feed 1kHz, 24.5mV from S.G. into input (REC L & R Terminal)	PB L & R Terminal, AC Volt Meter and Scope.	Load the TEST TAPE AC-513. 1. Push REC button. 2. Playback the 1kHz signal.	Adjust vVR3L, 3R until playback level and output signal level on recording operation will be equal.	See Fig. 3-5 and 3-6.
2.	REC Level Adj. 10kHz (LCh, RCH)	Feed 10kHz, 24.5mV from S.G. into input (REC L & R Terminal)	PB L & R Terminal, AC Volt Meter and Scope.	Load the TEST TAPE AC-513. 1. Push REC button. 2. Playback the 10kHz signal.	Adjust vVR4L, 4R until playback level and output signal level on recording operation will be equal.	See Fig. 3-5 and 3-6.
3.	Frequency Response Adj. 1kHz	Feed 1kHz 24.5mV and 1kHz from S.G. into input (REC L & R Terminal)	PB L & R Terminal, AC Volt Meter and Scope	Load the TEST TAPE AC-224. 1. Record the 1kHz signals from S.G. 2. Playback the 1kHz signal.	1. Confirm play signal level in less than Rec Signal level ±1.5dB on AC Volt Meter.	If not ±1.5dB, repeat Rec Level Adj. 1kHz
4.	Frequency Response Adj. 10kHz	Feed 10kHz 24.5mV and 10kHz from S.G. into input (REC L & R Terminal)	PB L & R Terminal, AC Volt Meter and Scope	Load the TEST TAPE AC-224. 1. Record the 10kHz signals from S.G. 2. Playback the 10kHz signal.	1. Confirm play signal level in less than Rec Signal level ±3.5dB on AC Volt Meter.	If not ±3.5dB, repeat Rec Level Adj. 10kHz

Fig. 3-5 Connection of 17P System Control Socket

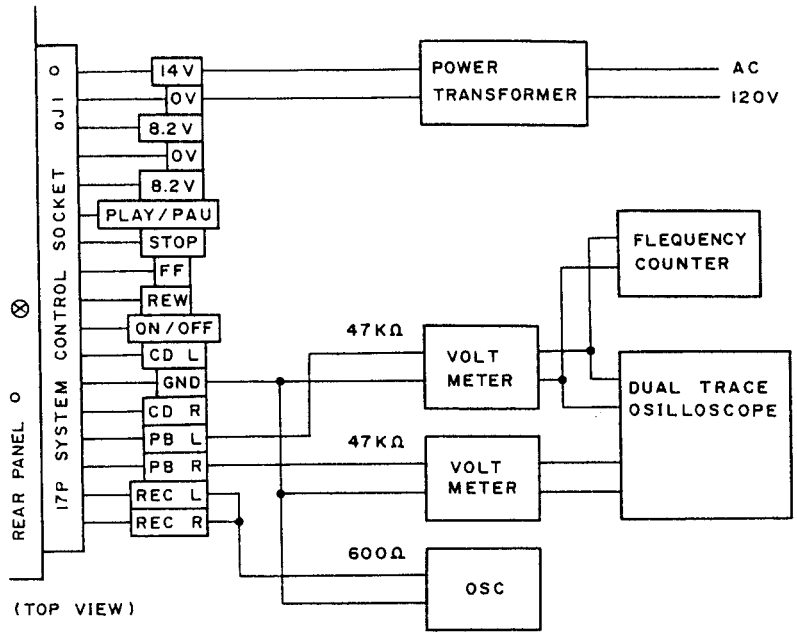
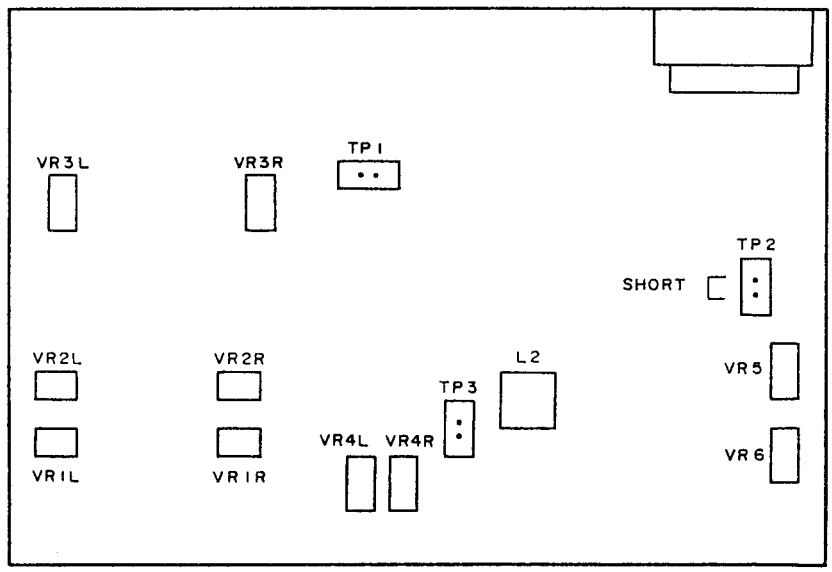


Fig. 3-6 F-6462 Cassette Deck Board



♦ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	—
SCT-F1K	1 kHz	High Frequency Equalization Check	—
SCT-F10K	10 kHz	REC/PB Head Adjustment	—
SCT-L400	400 Hz	Playback Level and Indicator Level Adjustment	—
SCT-S3KL	3 kHz	Speed Check and Wow & Flutter Check	—
* AC-224 (NORMAL)	—	Recording Bias Adjustment	TDK AD
* AC-513 (HIGH)	—	REC/PB Level Adjustment	TDK SA
* AC-712 (METAL)	—	Frequency Response Check	TDK MA

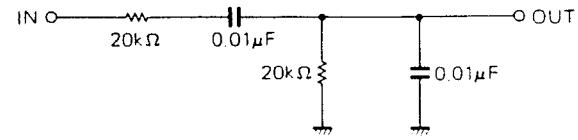
***Note:** Some reference tapes marked * are not supplied.
As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

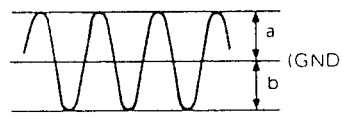
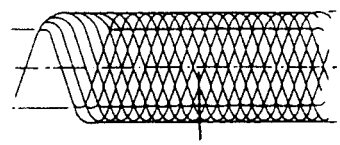
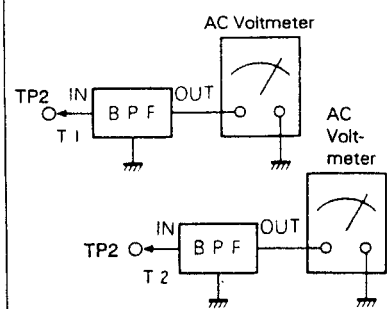
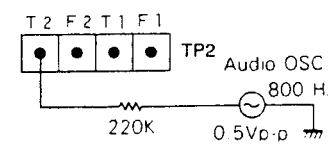
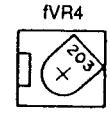
3-5. CD Adjustment

• **Cautions**

1. Turn the power OFF before removing the bonnet.
2. See Figure 3-7 for the locations where adjustments are to be carried out.
3. Use the EIAJ test disk CD-1.
4. The following band pass filter (BPF) is used for adjustments.
5. If the adjustment is unsatisfactory and playback is not possible, adjust as follows:
   1) Set fVR1, fVR2, fVR4 and fVR5 to their mid points.
   2) Adjust the VCO (fVR3) and select playback.
   3) Carry out adjustment steps 2 to 5.
6. In executing steps 2 to 5, connect the probe after playing the disc.

Band Pass Filter (BPF)



Step	Item	Measuring Location	Adjustment Location	Adjustment	Conditions and Notes
1	VCO adjustment (carry out in STOP state)	Connect a frequency counter to TP4 (PLCK)	fVR3 (VCO)	4.32MHz ± 30kHz	• Ground EFM output (JP68 of F-6467) • Turn ON the power then wait at least 10 seconds before adjusting.
2	Tracking offset adjustment	Connect an oscilloscope to T1 of TP2.	fVR1	 Set the oscilloscope to the DC range. Adjust so that a and b have the same level.	• Ground T2 of TP2. • Playback the 8th track of CD-1.
3	Focus offset	Connect an oscilloscope to the RF of TP1.	fVR2	Set to maximum.  Carry out adjustments to achieve a clean overall pattern and so that the indicated portion is wide and symmetrical.	• Playback the 8th track of CD-1.
4	Tracking gain adjustment	Connect AC voltmeter to T1 of TP2 via the BPF. Connect AC voltmeter to T2 of TP2 via the BPF.	fVR4	Using the indicated voltage at T1 of TP2 as a reference, adjust the voltage at T2 to –3.5dB. 	 • Playback the 4th track (no signal) of CD-1. • Apply an 800Hz signal of 0.5Vp-p from SG to T2 of TP2 via a resistance of 220kΩ. Adjust fVR4 to the position shown in the figure. If you do not have a BPF or if –3.5dB cannot be achieved. fVR4 

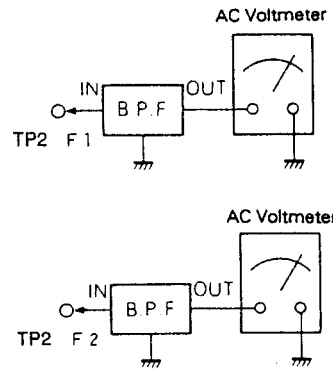
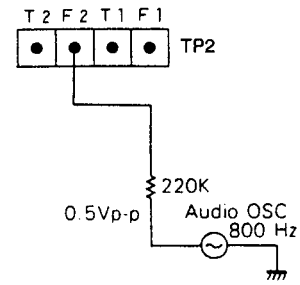
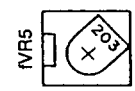
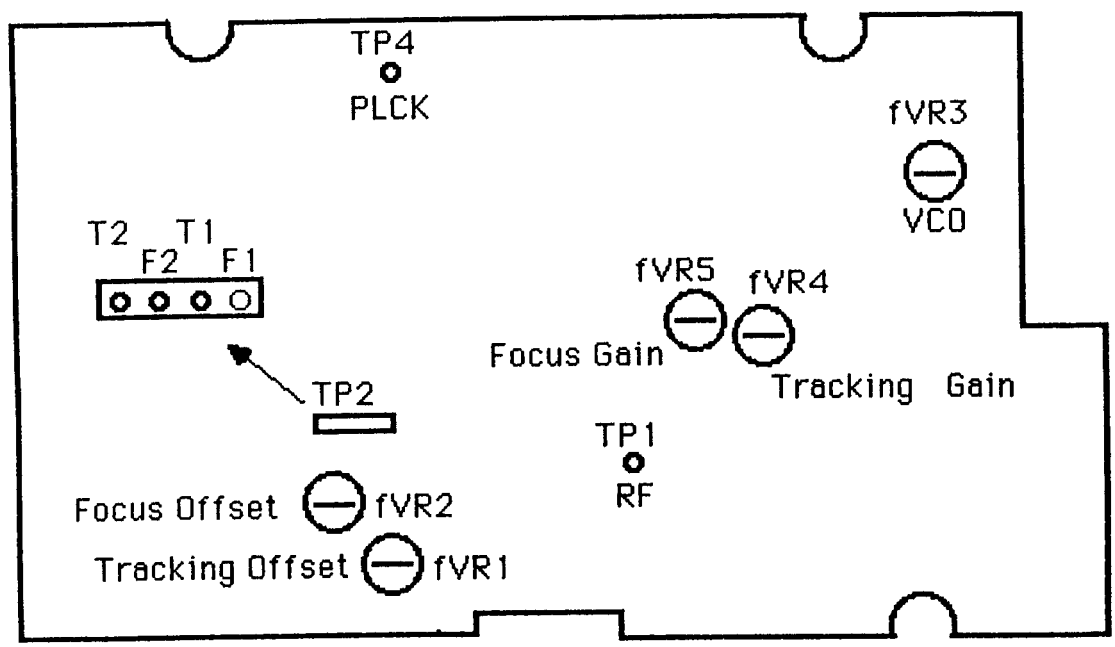
Step	Item	Measuring Location	Adjustment Location	Adjustment	Conditions and Notes
5	Focus gain adjustment	Connect AC voltmeter to F1 of TP2 via the BPF. Connect AC voltmeter to F2 of TP2 via the BPF.	fVR5	 Using the indicated voltage at F1 of TP2 as a reference, adjust the voltage at F2 to –2.5dB.	 • Playback the 4th track (no signal) of CD-1. • Apply an 800Hz signal of 0.5Vp-p from SG to F2 of TP2 via a resistance of 220kΩ.  Adjust fVR4 to position shown in the Figure if you do not have a BPF or if –2.5dB cannot be achieved.

Fig. 3-7 F-6467 CD Main Board



4. PARTS LIST OF BOARD

4-1. F-6462 Cassette Deck Board

<Stock No. 01235601>

Parts No.	Stock No.	Description
•Transistor		
⚠ mQ1	03083901	2SD313HP
mQ2	46367301	2SC2458
mQ3	46367301	2SC2458
•Diode		
⚠ mD1	03117700	10E-2
⚠ mD2	03117700	10E-2
⚠ mD3	03117700	10E-2
⚠ mD4	03117700	10E-2
•Zener Diode		
mDZ1	48555100	MTZ13A
or	48555200	MTZ13B
mL501	48289400	Inductor, 10μH
•Transistor		
nQ1	46834200	DTA144ES
oJ1	49587300	17P SYSTEM Control Socket
•Transistor		
vQ1	46367301	2SC2458
vQ2	46367301	2SC2458
vQ3	46367301	2SC2458
vQ4	46367301	2SC2458
vQ5	46367301	2SC2458
vQ6	46367301	2SC2458
vQ7	46367301	2SC2458
vQ8	46367301	2SC2458
vQ10	46359801	2SC2001
vQ11	46359801	2SC2001
vQ12	48061801	2SC3244
vQ13	46367301	2SC2458
vQ14	46367201	2SA1048
vQ15	46367301	2SC2458
vQ16	46367301	2SC2458
vQ17	46367301	2SC2458
vQ18	46367301	2SC2458
vQ19	46367301	2SC2458
vQ20	46834200	DTA144ES
vQ21	46367201	2SA1048
vQ22	46367301	2SC2458
vQ23	46367301	2SC2458
vQ24	46367301	2SC2458
vQ25	46367201	2SA1048
vQ26	46834200	DTA144ES
vQ27	46834200	DTA144ES
•IC		
vIC1	49323500	μPC1330HA
vIC2	49524000	CXA1115BP
vIC3	49562100	BA3308
vIC503	03607700	NJM4558D
or	49507200	RC4558D
•Diode		
vD1	46464100	1SS133
vD2	46464100	1SS133
vD3	46464100	1SS133
vD4	46464100	1SS133
vD5	46464100	1SS133
vD6	46464100	1SS133
vD7	46464100	1SS133

<F-6462>

Parts No.	Stock No.	Description
vD8	46464100	1SS133
vD9	46464100	1SS133
vD10	46464100	1SS133
vD11	03117700	10E-2
vD12	03117700	10E-2
vD13	46464100	1SS133
vD14	46464100	1SS133
vFL1	83232300	Trap Filter FB-9
vL1	83251900	Inductor
vL2	83232100	Inductor
vVR1	83216600	20kΩ S.V.R., PLAY Level (B Deck)
vVR2	83216600	20kΩ S.V.R., PLAY Level (A Deck)
vVR3	83216600	22kΩ S.V.R., Bias (1kHz)
vVR4	83216800	100kΩ S.V.R., Bias (10 kHz)
vVR5	83216400	5kΩ S.V.R., High Speed
vVR6	83216400	5kΩ S.V.R., Normal Speed
•IC		
xIC1	49557400	CXA1101P
xFL1	83232200	Dolby Filter FB-10D
xFL2	83232300	Filter, FB-9

4-2. F-6464 Dolby Noise Reduction SW Board

Parts No.	Stock No.	Description
oS2	48169400	Push SW., Dolby NR

4-3. F-6465 Speed Switch Board

Parts No.	Stock No.	Description
oS1	48169400	Push SW., SPEED

4-4. F-6466 Direction Indicator Board

Parts No.	Stock No.	Description
•LED		
nLD1	48841200	SEL3910A, ▷
nLD2	48841200	SEL3910A, ◁

4-5. F-6467 CD Main Board

<Stock No. 01235101>

Parts No.	Stock No.	Description
•Transistor		
fQ1	48000801	2SA934
fQ2	46367101	2SC2603
or	46367501	2SC945A
fQ3	46367001	2SA1115
or	46367201	2SA1048

to be continued

<F-6467>

Parts No.		Stock No.	Description
	or	46367401	2SA733A
fQ4		46367101	2SC2603
	or	46367501	2SC945A
fQ5		46367001	2SA1115
	or	46367201	2SA1048
	or	46367401	2SA733A
fQ6		46367001	2SA1115
	or	46367201	2SA1048
	or	46367401	2SA733A
fQ7		46359701	2SA952
fQ8		46359701	2SA952
fQ9		46359801	2SC2001
fQ10		46359801	2SC2001
fQ11		48000901	2SC2060
fQ12		48000801	2SA934
fQ13		48000901	2SC2060
fQ14		48000801	2SA934
fQ15		48000901	2SC2060
fQ16		48000801	2SA934
fQ17		48000901	2SC2060
fQ18		48000801	2SA934
fQ21		46367501	2SC945A
fQ22		46367501	2SC945A
•IC			
fIC1		49554800	CXA1081M
fIC2		49552800	CXD1167Q
fIC3		49379400	CXA1082BQ
fIC4		48053600	μPD4013BC
	or	07107500	TC4013BP
fXO1		83226800	Quartz Element
•Diode			
fD1		46464100	1SS133
fD2		46464100	1SS133
fD3		46464100	1SS133
fD4		46464100	1SS133
fD5		46464100	1SS133
fD6		46464100	1SS133
fL1		48289400	10μH Inductor
fVR1		83216600	20kΩ S.V.R., T. offset
fVR2		83216500	10kΩ S.V.R., F. offset
fVR3		83216300	2kΩ S.V.R., VCO
fVR4		83216600	20kΩ S.V.R., T. Gain
fVR5		83216600	20kΩ S.V.R., G. Gain
nLC1		83229900	Liquid Crystal Display
•Transistor			
vQ501		46604301	2SC3327
vQ502		46604301	2SC3327
•IC			
vIC501		49554700	μPD6376GS
•Transistor			
wQ1		48217800	DTC114ES
wQ2		48217800	DTC114ES
wQ3		48217800	DTC114ES
wQ4		48217800	DTC114ES
wQ5		46367501	2SC945A
wQ6		48230400	DTC143TS
wQ7		46719800	DTA124ES
•IC			
wIC1		49554900	CXP1001AQ

<F-6467>

Parts No.	Stock No.	Description
•Diode		
wD1	46464100	1SS133

4-6. F-6468 Power Supply Board

<Stock No. 01235201>

Parts No.	Stock No.	Description
•Transistor		
⚠ mQ501	03083901	2SD313HP
⚠ mQ502	48063301	2SB507
⚠ mQ503	46359801	2SC2001
⚠ mQ504	46359701	2SA952
mQ505	46359801	2SC2001
mQ506	46359701	2SA952
mQ507	46367401	2SA733A
•Diode		
⚠ mD501	83226700	B20SL
mD503	46464100	1SS133
mR3, 4	46403200	100Ω 1/2W N.I.R.
mR501, 502	46404100	560Ω 1/2W N.I.R.
•Zener Diode		
mDZ501	46826200	RD8.2E-B2
mDZ502	46826200	RD8.2E-B2
mDZ503	46825000	RD5.6E-B2
mDZ504	46825000	RD5.6E-B2
mL502	48289400	Inductor, 10μH

4-7. F-6469 Low Pass Filter Board

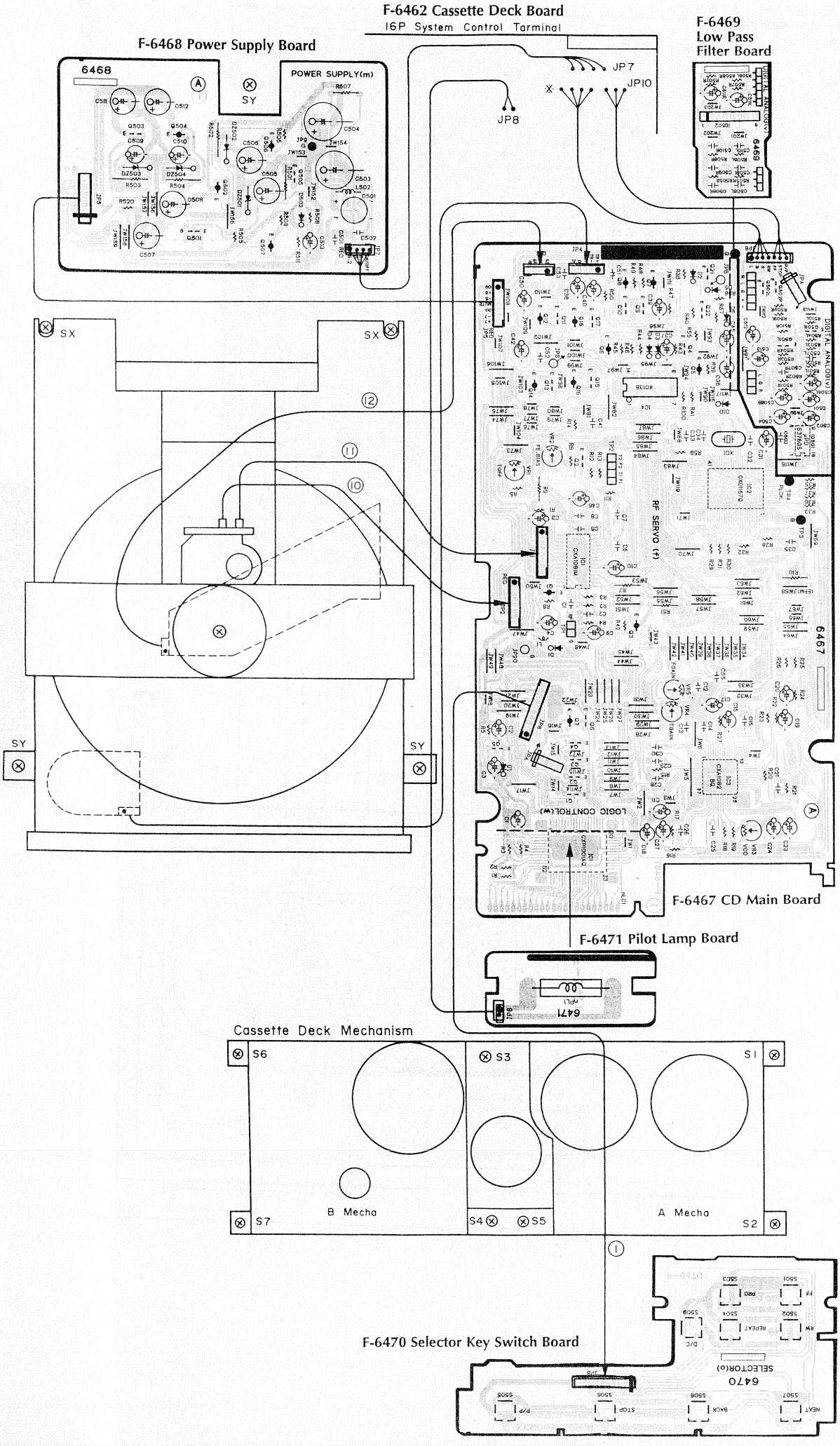
Parts No.		Stock No.	Description
•IC			
vIC502		49439500	NJM4558L
	or	49553100	RC4558L

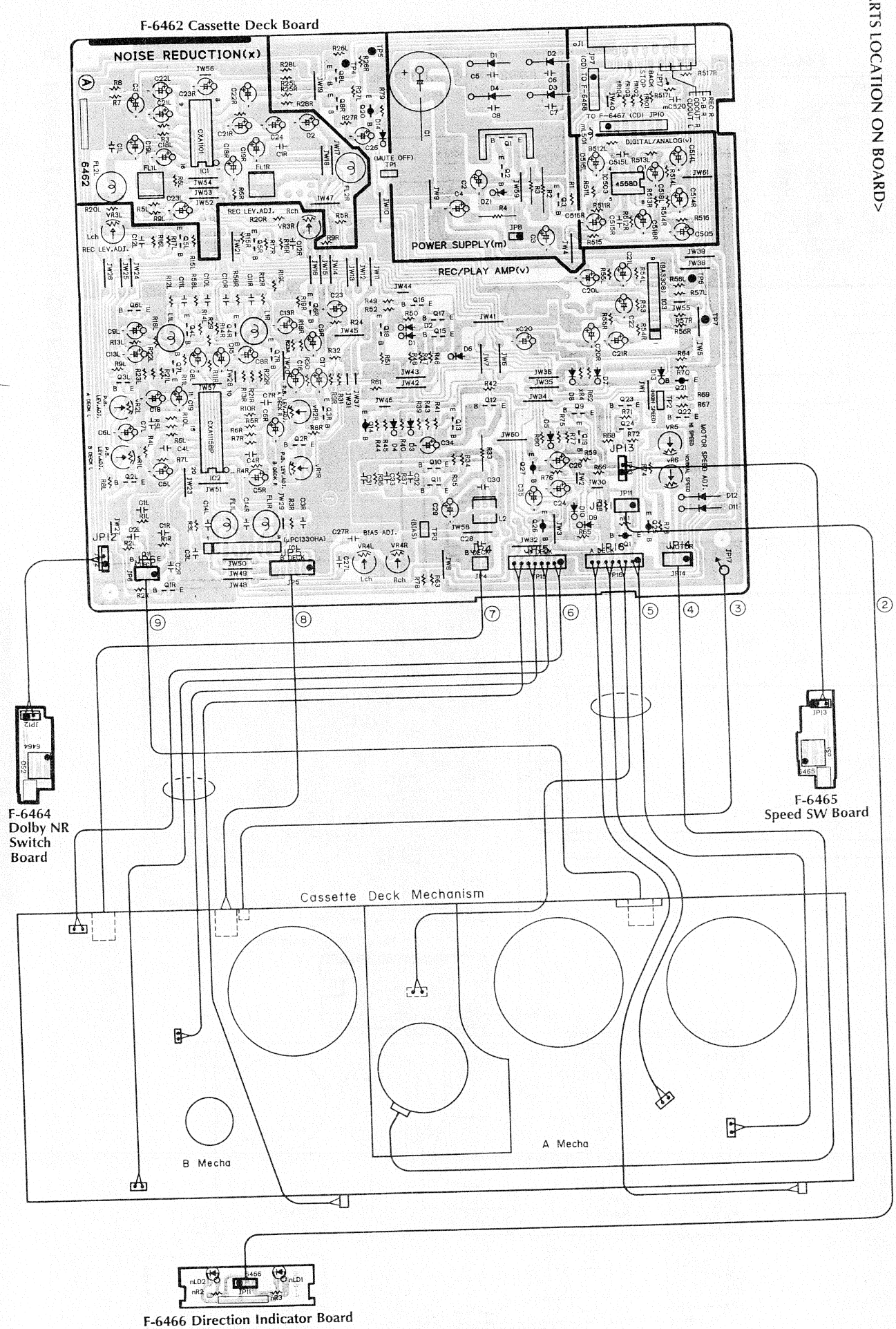
4-8. F-6470 Selector Key Switch Board

Parts No.	Stock No.	Description
oS501	48306900	Push SW., ▶▶
oS502	48306900	Push SW., ◀◀
oS503	48306900	Push SW., MEMORY
oS504	48306900	Push SW., REPEAT
oS505	48306900	Push SW., ▶/II
oS506	48306900	Push SW., ■
oS507	48306900	Push SW., ▶▶I
oS508	48306900	Push SW., I◀◀
oS509	48306900	Push SW., OPEN/CLOSE

4-9. F-6471 Pilot Lamp Board

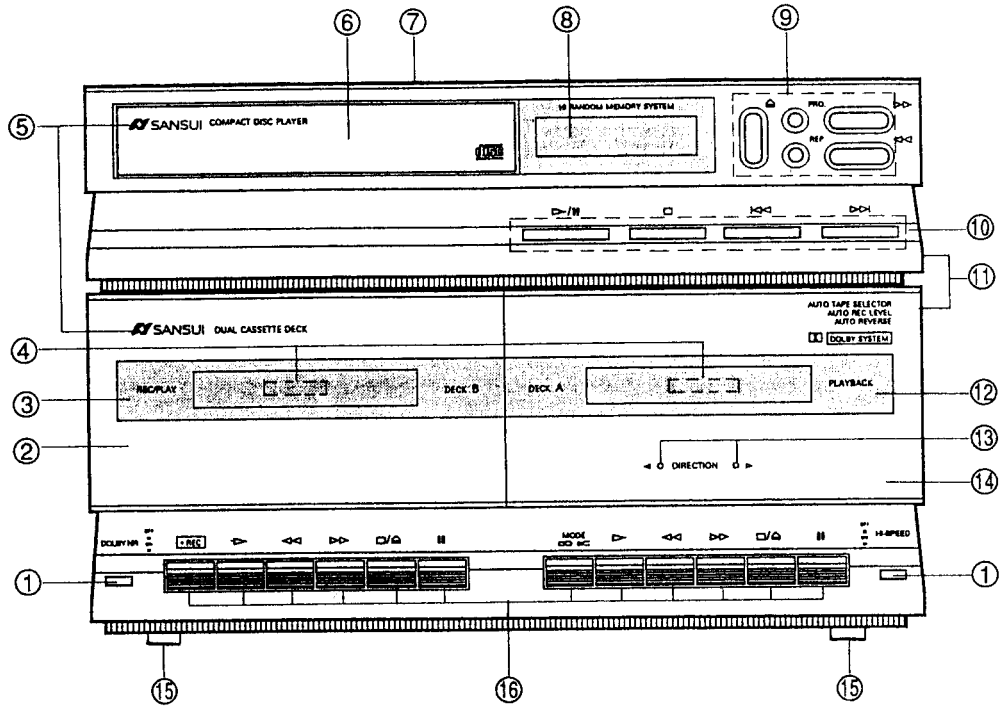
Parts No.	Stock No.	Description
nPL1	83226300	Pilot Lamp, 12V 60mA


F-6462 Cassette Deck Board
16P System Control Terminal
F-6468 Power Supply Board
6468
POWER SUPPLY(m)
F-6469
Low Pass
Filter Board
JP7
JP10
JP8
SX
SY
RF SERVO (f)
LOGIC CONTROL(W)
6467
F-6467 CD Main Board
F-6471 Pilot Lamp Board
Cassette Deck Mechanism
S1
S2
S3
S4
S5
S6
S7
A Mecha
B Mecha
F-6470 Selector Key Switch Board
SELECTOR(o)
6470


F-6462 Cassette Deck Board
NOISE REDUCTION(x)
POWER SUPPLY(m)
REC/PLAY AMP(v)
DIGITAL/ANALOG(v)
F-6464
Dolby NR
Switch
Board
F-6465
Speed SW Board
Cassette Deck Mechanism
B Mecha
A Mecha
F-6466 Direction Indicator Board

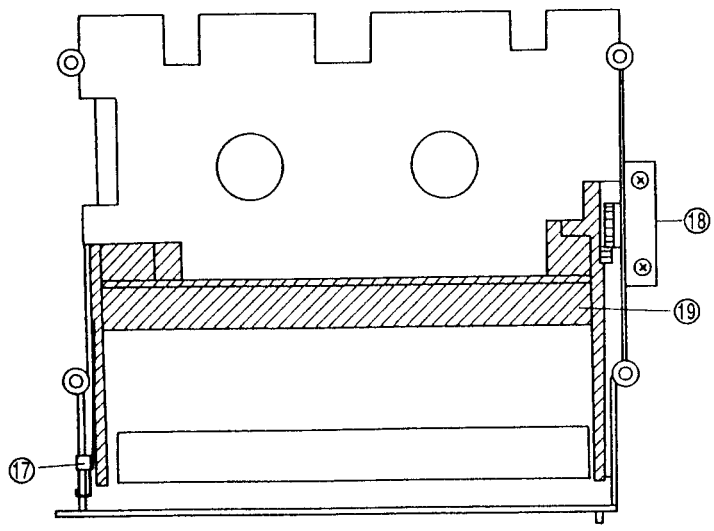
6. PARTS LIST OF SET

• Top View



• Cassette Holder

(Rear Side)



Parts List

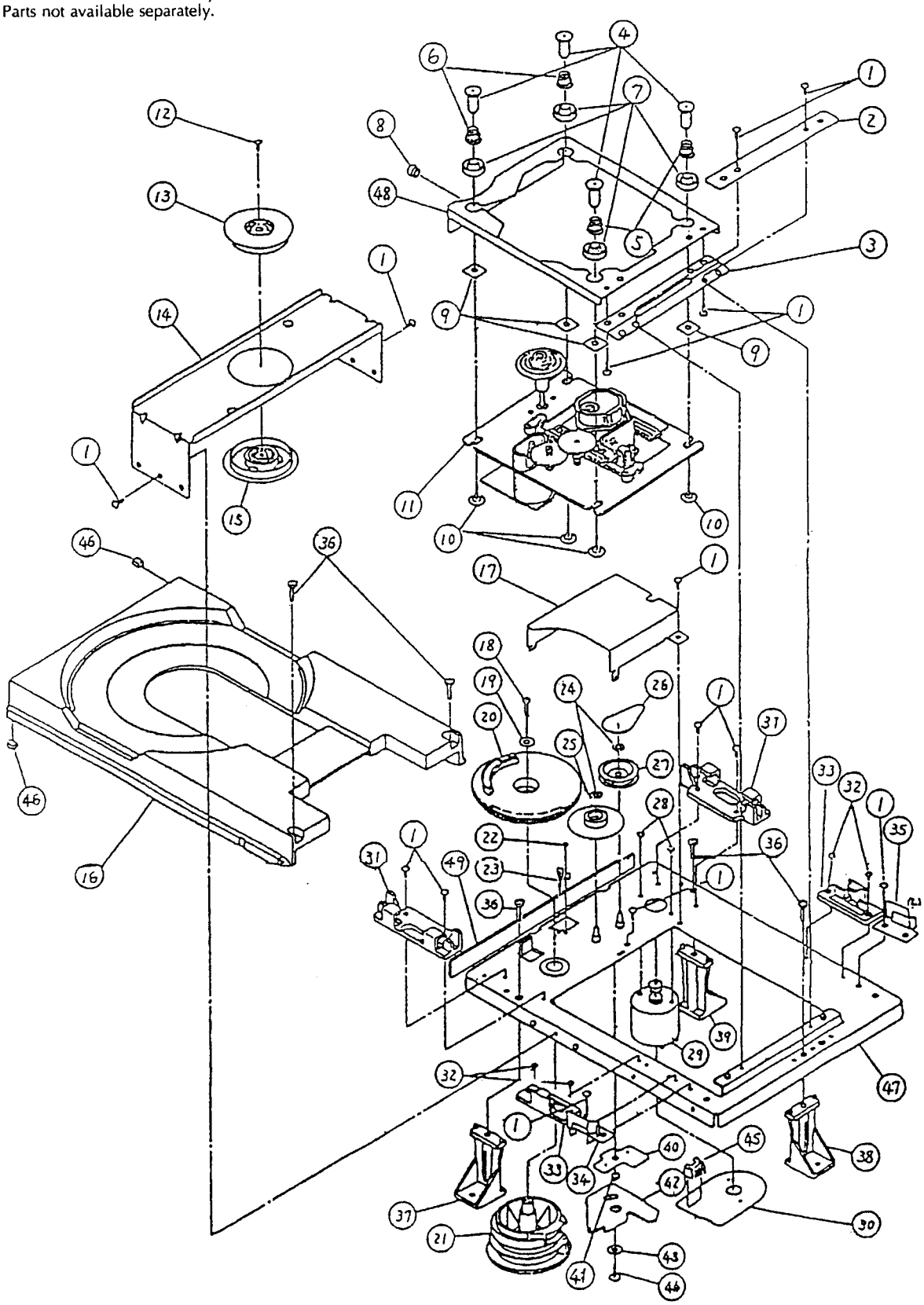
Parts No.	Stock No.	Description
1	85009900	Push Knob
2	85009200	Cassette Door (L)
3	85009800	Cassette Window (L)
4	23274200	Mirror Sheet
5	85022000	Logo Badge
6	85010500	Tray Panel Cover
7	84645900	Bonnet
8	85009400	Display Window
9	85009500	Knob, ▷▷, ◁◁ etc.
10	84641300	Knob, ⏮, ⏭ etc.

Parts No.	Stock No.	Description
11	85009000	Front Panel
12	85009700	Cassette Window, R
13	84642100	Indicator
14	85009300	Cassette Door, R
15	84642500	Leg Sheet
16	85010000	Cassette Knob
17	83255700	Spring
18	83255600	Damper
19	85009100	Cassette Holder

7. EXPLODED VIEW OF CD MECHANISM & PARTS LIST

CD Mechanism Ass'y (Type No. KSL-150A CM3 Stock No. C486040394)

Note: Use this list for reference only.
Parts not available separately.



8. REPLACEMENT OF MAIN PARTS

A. Front Panel

1. Remove the bonnet.
2. Remove the lead connector ① of F-6467. (See the Parts Location on Board on Page 10.)
3. Remove lead connectors ② through ⑨ of F-6462. (See the Parts Location on Board on Page 10.)
4. Remove 3 set screws on the lower side of the panel.
5. Remove 2 set screws on both sides of the panel.
6. Draw the panel towards the front side.
7. Remove the Cassette Deck Mechanism Assy, board F-6470, F-6460 & F-6465, cassette holder, etc. (See B. Cassette Deck Mechanism.)

B. Cassette Deck Mechanism Assy

1. Remove the bonnet.
2. Remove the front panel. (Only for the Deck Mechanism Assy)
3. Remove 7 Deck Mechanism Assy set screws (S1) through (S7) . (See the Parts Location On Board on Page 10.)
4. Open the Cassette Door.
5. Draw the Deck Mechanism Assy out of the panel, from the rear side.

C. Tray Panel of CD

1. Turn ON the OPEN/CLOSE switch and pull the tray out.
2. Draw the tray panel out upwardly.

D. Tray of CD

1. Remove the bonnet.
2. Remove 2 SX screws in the rear part of the tray. (See the Parts Location On Board on Page 10.)
3. Set the OPEN/CLOSE switch to ON and pull the tray out.
4. Draw the tray out towards you.

* To mount the tray, insert it in the same status as it was drawn out towards you.

E. CD Mechanism Assy and Pickup Assy

* Before removing lead connectors ⑩ and ⑪ (See Page 10) from the Pickup, solder the portion shown by the arrow of Fig. 8-2. This is to prevent the Pickup from electrostatic damage. On the contrary, before mounting it, first connect the lead connector and then disconnect the soldering in the portion of the arrow shown in Fig. 8-2.

1. Remove the bonnet.
2. Pull the tray out.
3. Remove 3 screws (S1) which fix the Mechanism Assy. (See the Parts Location on Board on Page 10.)
4. Remove the board F-6464. (See the Parts Location on Board on Page 11.)
5. Remove the chuck chassis.
6. Remove 2 shaft clamps ⑫.
7. Remove screw ⑧ and gear A ⑨.
8. Pull the shaft out of the Pickup Assy.
9. Remove lead connectors ⑩, ⑪ and ⑫ from the CD Mechanism Assy. (See the Parts Location on Board on Page 10.)

KSM-150 Drive unit

Fig. 8-1

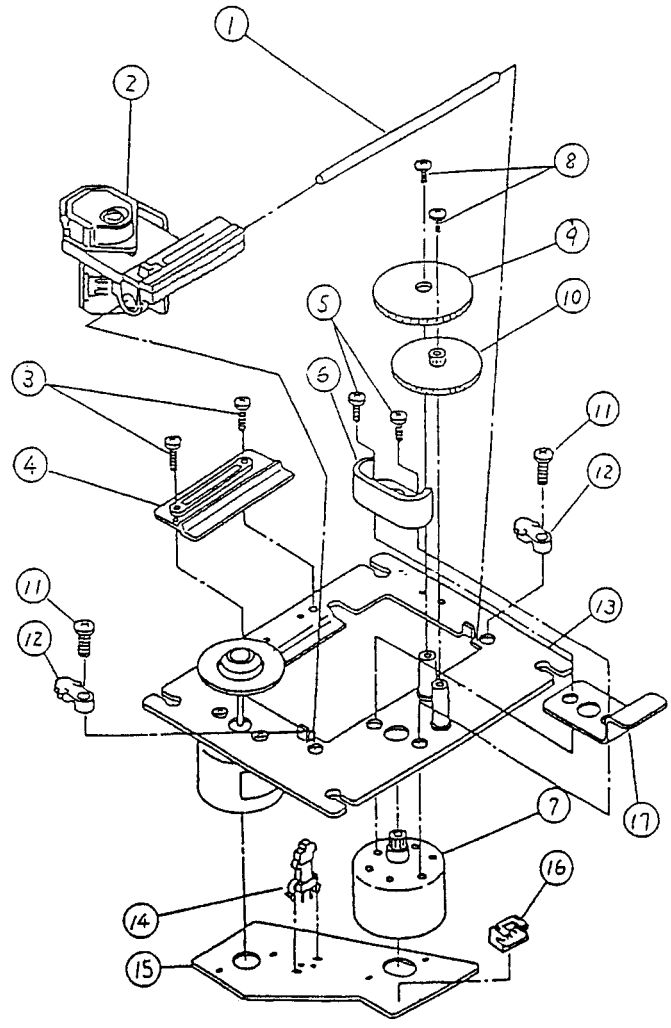
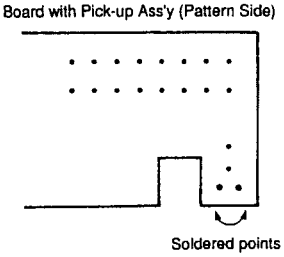


Fig. 8-2



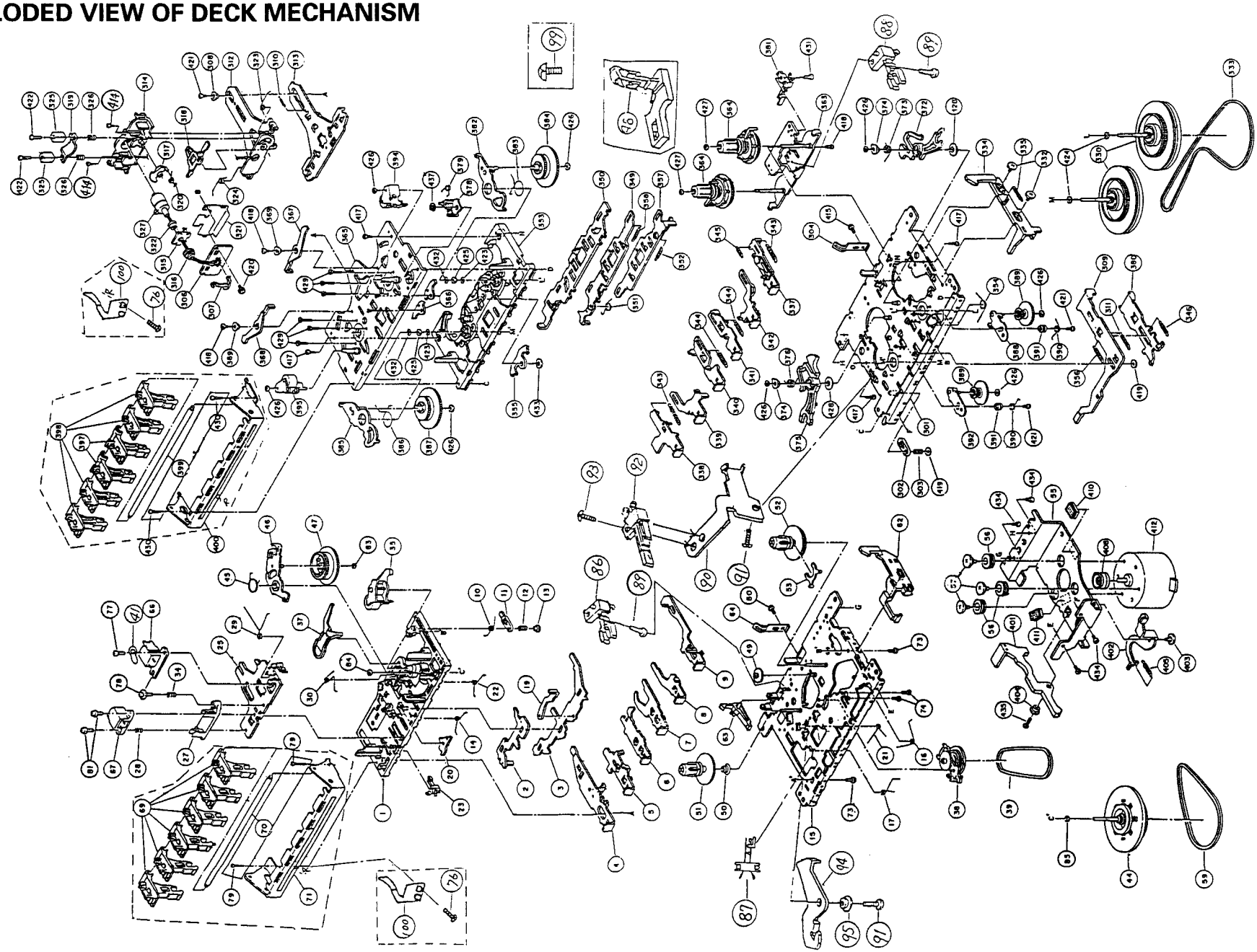
9. PARTS LIST OF DECK MECHANISM

Parts No.	Stock No.	Description
1	0192114301	Base Ass'y
2	0019211409	Switch Actuator
3	0019211408	Push Button Actuator
4	0019211422	Record Button Lever
5	0019211423	Play Button Lever
6	0019211424	Rewind Button Lever
7	0019211425	Fast Forward Button Lever
8	0019211426	Stop Button Lever
9	0019211461	Pause Button Lever
10	019211413A	P Control Spring
11	0019211455	Pause Lever (E)
12	0019211412	Pause Lever Spring
13	0019211411	Pause Stopper
14	0019211414	Button Lever Spring (A)
15	0192101501	Chassis Ass'y
16	0019211416	E Actuator Spring
17	0019211417	P.S. Lever Spring
19	0182101159	E Kick Lever
20	0019211420	PR Stopper
21	0019211421	Record Button Lever Spring
22	0019211415	Button Lever Spring (B)
23	4400000101	Leaf Switch MSW-1541T
25	0019210302	Head Panel
27	0019210306	Head Base
28	0018210308	E.H. Spring
29	0019210303	Panel P Spring
30	0019211418	M Control Spring
34	0018210307	Azimuth Spring
35	0192104301	Pinch Roller Arm Ass'y
37	0019212604	Sensing Lever
38	0192107302	RF Clutch Ass'y
39	0019210703	RF Belt (Square)
41	0094800000	B3 Lug 2.0
44	0192109303	Flywheel Ass'y
45	0019212605	Gear Plate Spring
46	0192126502	Gear Plate Ass'y
47	0019212602	Cam Gear
49	0018211070	FF Gear
50	0018291099	Back Tension Spring
51	0192105306	Supply Reel Ass'y
52	0192105305	Take Up Reel Ass'y
53	0019210506	Sensor
55	0018511410	Motor Bracket
56	0018201306	Motor Rubber
57	0018211202	Motor Collar Screw
59	0016680801	Main Belt (Square)
62	0019211302	Eject Slide Lever
63	0018211069	Record Safety Lever
64	0018291006	Pack Spring
66	4030420222	R/P Head (MS15R-AA2N1)
67	4030320199	Erase Head (LE15A-C1)
69	0018213107	Operation Lever
70	0018293103	Button Lever Shaft
71	0018213119	Button Flame (S)
73	3049052005	P Tapping Bind Screw M2×5
74	3049222045	Camera Tapping Screw M2×4.5
76	3049042004	C Tapping Screw m2×4
77	3019272003	(+) Bind Screw M2×3
78	0099220000	Azimuth Screw M2×7
79	3049222009	9 (Taptite-B) FLT2009 ZN3A
80	3049042003	C Tapping Screw M2×3 (Special)
81	3019082075	(+) (–) Cap Screw M2×7.5
83	3029123803	P Washer Cut 1.2×3.8×0.3
84	3029143805	P Washer Cut 1.4×3.8×0.5
85	3029203503	P Washer 2×3.5×0.3
86	0064010162	Record Switch MSW-1275ASNK
87	4400000138	Leaf Switch LSA-1115RK1
88	0064010138	Leaf Switch MSW-1275
89	3049032005	Tapping Screw 2×5
90	0018510118	Dir Switch Bracket
91	3049032004	Tapping Screw 2×4
92	4400000076	Leaf Switch MSW-1473NBK
93	3049032004	Tapping Screw 2×4
94	0019210201	Record Arm
98	4400000090	Leaf Switch MSW-1664
99	3019262005	Cap Screw 2×5 3019262005
100	0018213120	Frame Bracket
301	0185101303	Chassis Ass'y
302	0018210115	Pause Lever
303	0018210116	Pause Lever Spring
301	0018291006	Pack Spring
306	0018510121	H.W. Terminal Plate
307	0018650965	Wire Clamp
308	0018510453	H.P. Collar
309	0018510408	Release Plate
310	0018510409	R.C. Plate Spring
311	0018510458	R.C. Spring (M)
312	0018510414	Head Panel
313	0018510415	R.C, Plate
314	0018510439	Head Mount
315	0018510418	Holder
316	0018510444	Pinion Gear
317	0018510420	H Turn Over Gear
318	0018510421	Head Slide Plate
319	0018510424	Head Spring Plate
320	0018510425	H Turn Over Spring

Parts No.	Stock No.	Description
321	0018510445	H Shield Plate
322	0018510427	H Holder Spring
323	0018510428	Pinch Roller Spring (F)
324	0018510429	Pinch Roller Spring (R)
325	0018510436	Screw Holder
326	0018650259	Azimuth Spring (D)
327	4030420223	Play Head (YK10R-SS2C0)
330	0185112504	Flywheel Ass'y
332	0018211223	P.K. Collar Screw (A)
333	0018511417	Main Belt (Square)
334	0018511703	Eject Slide Lever
335	0018511702	Eject Slide Lever Spring
337	0185102312	Prog Button Lever Ass'y
338	0185102325	Mode Button Lever Ass'y
339	018510232T	Play Button Lever
340	0018510235	FF Button Lever (R)
341	0018510234	FF Button Lever (F)
342	018510231T	Stop Button Lever
343	0018510270	Prog Button Lever Spring
344	0018510269	FF Button Lever Spring
345	0018510227	Pull Arm Spring
346	0018511606	FF Switch Plate Spring
349	0185102321	Lock Actuator Ass'y
350	0018510284	Slide Plate
351	0018510276	Lock Release spring
352	0018510267	Switch Actuator Spring
353	0185102504	Button Base Ass'y
354	0018510221	Stop Button Lever Spring
355	0018510241	FF Control Arm
356	0018510242	Button Lever Spring (P)
357	0185102322	Switch Actuator Ass'y
358	0018510267	Lock Actuator Spring
363	0185111301	Reel Plate Ass'y
364	0185111501	Reel Ass'y
365	0185118303	Sub Chassis Ass'y
366	0018511810	RC Arm
367	018511805T	Auto Control Arm (F)
368	018511806T	Auto Control Arm (R)
369	0018511807	Control Arm Collar
372	0018512001	Auto Lever (F)
373	0018512003	Auto Lever (R) Spring
374	0018512005	Spring Stopper
375	0018512002	Auto Lever (R)
376	0018512004	Auto Lever (F) Spring
378	0018510303	Turn Over Arm
379	0018510304	Turn Over Spring
380	0018511602	FF Switch Plate
381	4400000148	Leaf Switch MSW-1290CV
382	0185105302	T Gear Arm (F) Ass'y
383	0018510504	T Gear Arm (F) Spring
384	0018510503	T Cam Gear (F)
385	0185106302	T Gear Arm (R) Ass'y
386	0018510603	T Gear Arm (R) Spring
387	0018510602	T Cam Gear (R)
388	0185107301	FF Gear Arm (F) Ass'y
389	0018510703	FF Gear
390	0018510704	FF Gear Arm Spring (F)
391	0018510705	FF Gear Arm Collar
392	0185108301	FF Gear Arm (R) Ass'y
394	0185109502	Pinch Roller (F) Ass'y
395	0185110502	Pinch Roller (R) Ass'y
397	0018513104	Operation Lever
398	0018213107	Operation Lever
399	0018293103	Button Lever Shaft
400	0018513110	Button Flame (S)
401	0018511419	P Kick Lever (B)
402	0018511413	P Kick Lever (A)
403	0018211223	P Kick Collar Screw (A)
404	0018211224	Collar (B)
405	0018511404	P Kick Lever Spring
408	0018511420	Motor Pulley
410	0182112101	Anti-Vibration Felt Mat
411	0018211296	Anti-Vibration Felt Mat
412	4020100179	Motor Shu-2L00
414	3049251704	Camera S Tapping Screw 1.7×4
415	3049302003	C Tapping Screw M2×3 (Special)
417	3049052006	P Tapping Screw M2×6
418	3049221703	Camera S Tapping Screw M1.7×3
419	3029215005	P Washer Cut 2.1×5×0.5
420	3019282004	Two Lock Screw M2×4
421	3049251704	Camera S Tapping Screw M1.7×4
422	3019082012	(+) (–) Screw M2×12
423	3029203503	P Washer 2×3.5×0.3
424	3029213003	P Washer 2.1×3×0.3
425	3029144005	P Washer Cut 1.4×4×0.5
426	3029123025	P Washer Cut 1.2×3×0.25
427	3029123704	P Washer Cut 1.2×7×0.4
428	3029308513	P Washer 3×8.5×0.13
429	3049251785	Camera S Tapping Screw M1.7×8.5
430	3049042009	C Tapping Screw M2×9
431	3049292005	(+) C Tapping Screw M2×5
432	3029174003	P Washer 1.75×4×0.3
433	3029286005	P Washer 2.8×6×0.5
434	3049042004	C Tapping Screw M2×4
436	0011140302	Cord Clamp
437	3130000020	E Ring S2.0

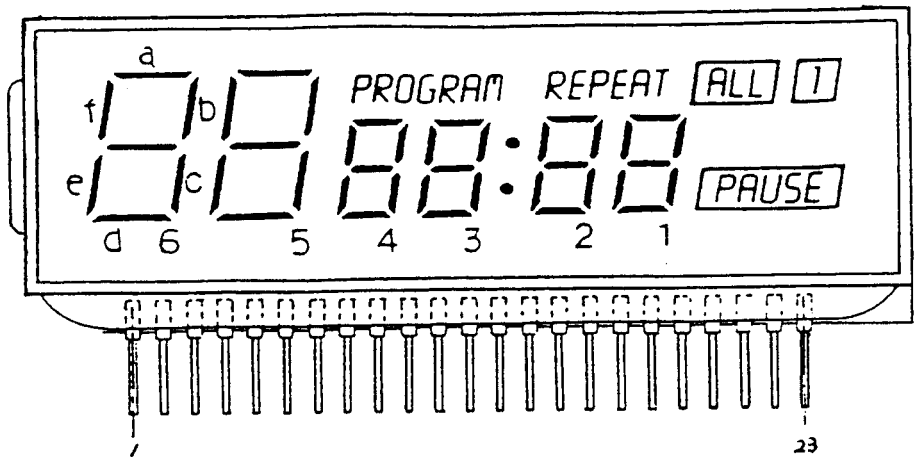
MC-1000/1000L
(CD & Deck Section)

10. EXPLODED VIEW OF DECK MECHANISM



11. INTERIOR BLOCK DIAGRAM & TERMINAL FUNCTION OF LCD & ICS

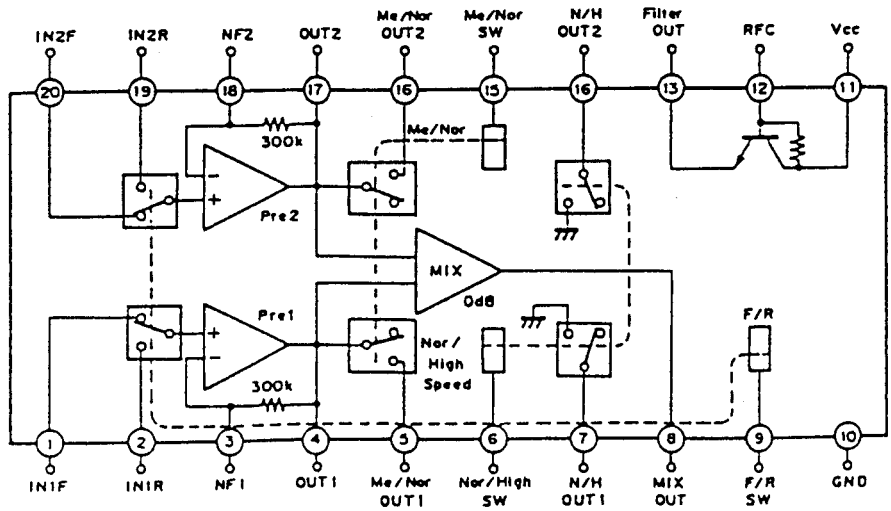
• HLC 9538-01-2111 <LCD Display>



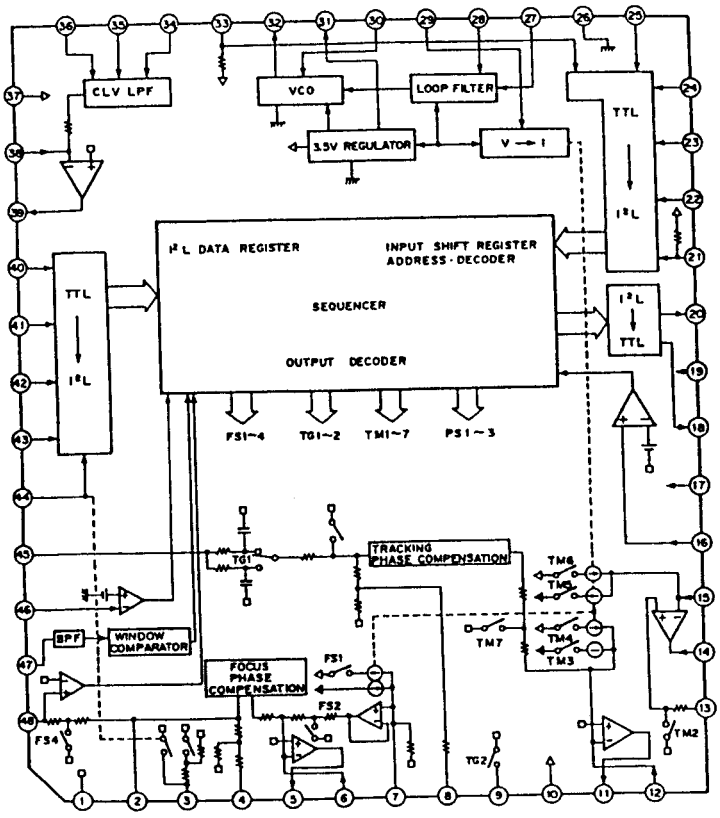
No.	COM. 1	COM. 2	COM. 3
1	COM. 1		
2		COM. 2	
3			COM. 3
4	REPEAT	1	ALL
5	PAUSE		
6		6-e	6-f
7	6-d	6-g	6-a
8	PROGRAM	6-c	6-b
9		5-e	5-f
10	5-d	5-g	5-a
11		5-c	5-b
12		4-e	4-f

No.	COM. 1	COM. 2	COM. 3
13	4-d	4-g	4-a
14		4-c	4-b
15		3-e	3-f
16	3-d	3-g	3-a
17	:	3-c	3-b
18		2-e	2-f
19	2-d	2-g	2-a
20		2-c	2-b
21		1-e	1-f
22	1-d	1-g	1-a
23		1-c	1-b

• CXA1115BP <Play Amp>



• CXA1082BQ <Focus/Tracking Servo>



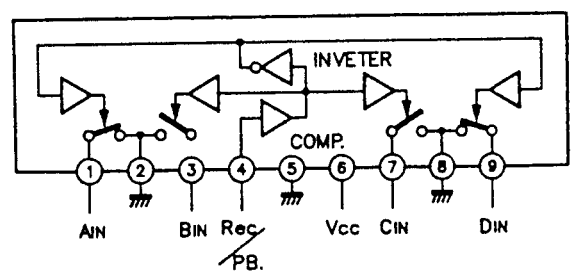
♦ Terminal Function <CXA1082BQ>

Pin No.	Pin Name	I/O	Description
2	FGD	I	A capacitor is connected between this Pin and F3 (Pin 3) for decreasing high-frequency gain of focus servo.
3	FS3	O	Terminal for switching high-frequency gain of focus servo.
4	FLB	—	This Pin is used to connect a time constant for increasing low-frequency characteristic of focus servo.
5	FEO	O	Terminal for outputting a signal for driving focus coil.
11	TAO	O	Terminal for outputting a signal for driving tracking coil.
14	SLD	O	Terminal for outputting a drive signal for sled motor.
39	SPDLO	O	Terminal for outputting a drive signal for spindle (disc) motor.
6	FE ⊖	I	Focus amplifier inverting input.
7	SRCH	I	This terminal is used to determine time constant for genarating focus search wavefoam.
8	TGU TG2		Terminals are used to determine a time constant for switching tracking high-frequency gain.
12	TA ⊖	I	Tracking amplifier inverting input.
13	SL ⊕	I	Sled (Feed) amplifier non-inverting input.
15	SL ⊖	I	Sled amplifier inverting input.
16	SSTOP	I	Terminal for inputting a signal from limit switch ON/OFF for detecting innermost track of disc.
17	FSET	I	Terminal for setting focus and tracking phase-compensation peaks and fo of CLV LPF.
18	SENS	O	Terminal for outputting internal condition data.
20	C.OUT	O	Terminal for outputting a signal for counting track number of disc.
21	DIRC		This terminal is used for one-track jump operation.

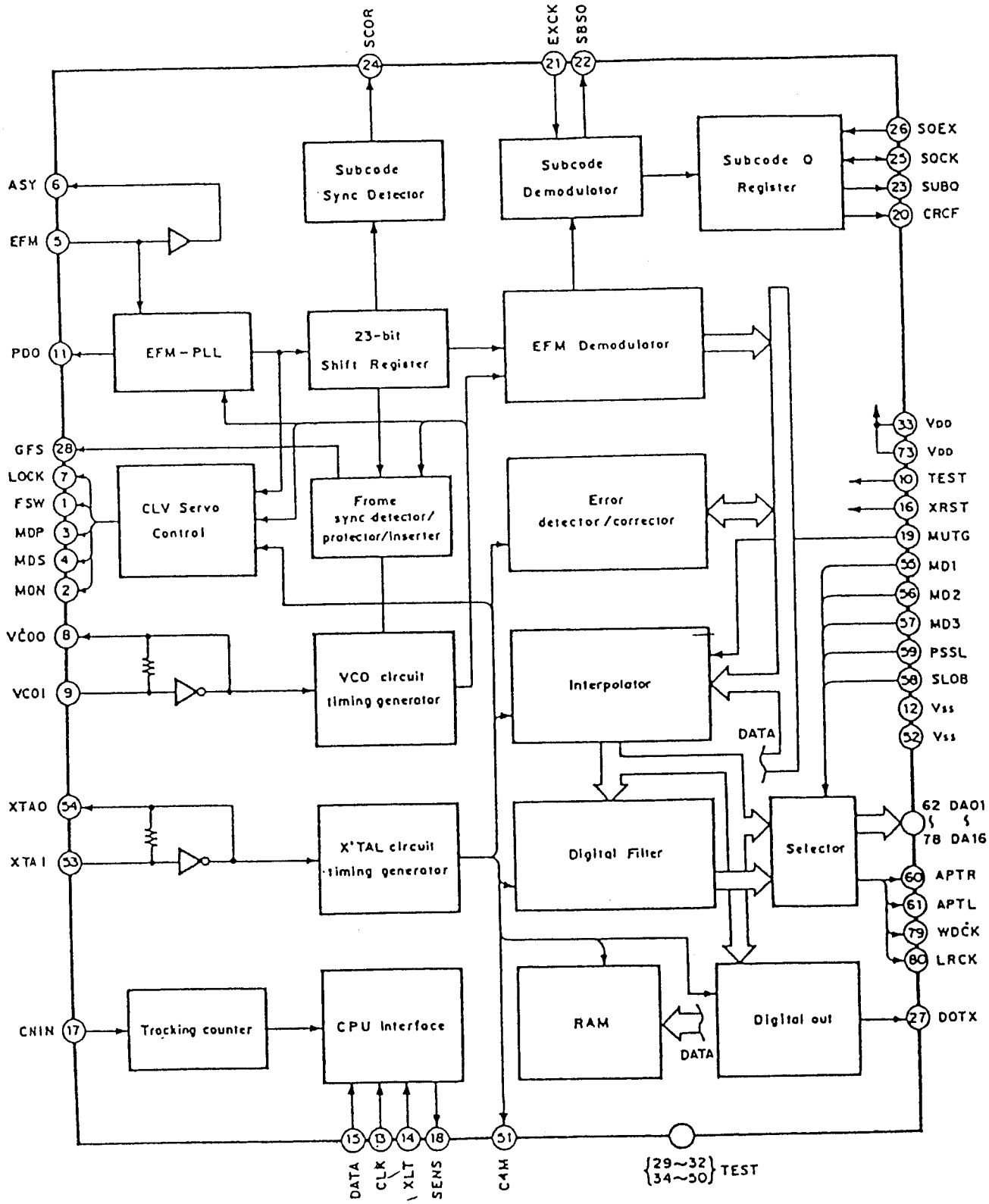
<CXA1082BQ>

Pin No.	Pin Name	I/O	Description
22	XRST		Terminal for inputting a reset signal. Reset operation in "L" level.
23	DATA	I	Serial data input from the CXP1001AQ mechanism control.
24	XLT	I	Terminal for inputting a latch signal for serial data from the CXP1001AQ mechanism control.
25	CLK	I	Serial data clock input from the CXP1001AQ mechanism control.
26	DGND	—	Ground.
28	PDI	I	PDO signal input from the phase comparator of the CXD1167Q digital signal processing.
29	ISET	O	Terminal for outputting a current to determine focus search, track jump and sleding kick height.
30	VCOF	I	VCO free-frequency is practically proportional to resistance between this Pin and Pin 31.
32	C864	O	Internal 8.64 MHz VCO output.
34	MDP	I	A spindle motor driving signal input from the CXD1125 digital signal processing (MDP terminal).
35	MON	I	A spindle motor ON/OFF signal input from the CXD1125 digital signal processing (MON terminal).
36	FSW	—	This terminal is used to determine a time constant for LPF of CLV servo error signal.
38	SPDL ⊖	I	Spindle drive amplifier inverting input.
40	WDCK	I	Auto sequence clock input. Typical frequency = 88.2 kHz.
41	FOK	I	FOK signal input from the CXA1081S.
42	MIRR	I	Mirror comparator signal input from the CXA1081S.
44	DFCT	I	Defect comparator signal input from the CXA1081S.
45	TE	I	Tracking error amplifier signal input from CXA1081S.
46	TZC	I	Tracking zero cross comparator signal input.
47	ATSC	I	Window compartor input for ATSC detection.
48	FE	I	Focus error amplifier signal input.

• μPC1330H <Selector>



CXD1167Q <Digital Signal Processing>



Terminal Function <CXD-1167Q>

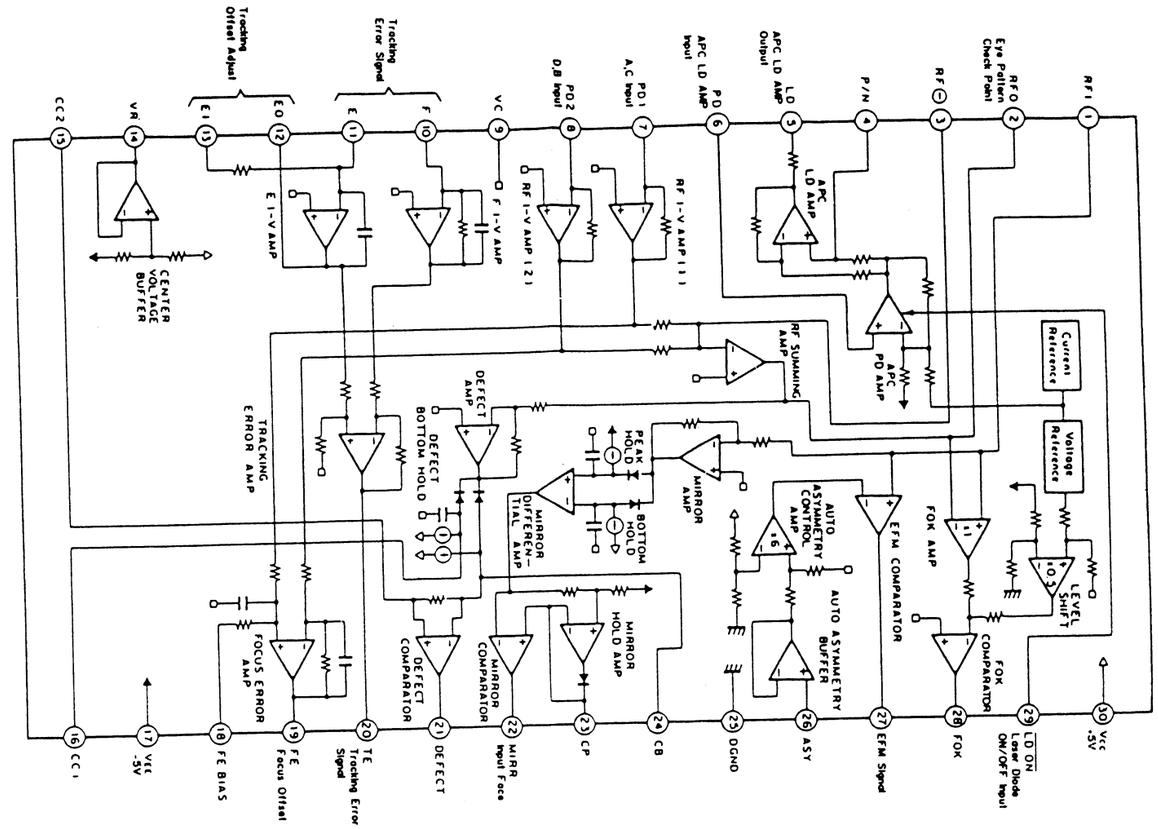
Pin No.	Pin Name	I/O	Function
1	FSW	O	Output to change the time constant of the output filter for the spindle motor
2	MON	O	Output to control ON/OFF of the spindle motor
3	MDP	O	Output to drive the spindle motor. For rough control in the CLV-S mode and phase control in the CLV-P mode.
4	MDS	O	Output to drive the spindle motor. For speed control in the CLV-P mode.
5	EFM	I	EFM signal input from the RF amplifier
6	ASY	O	Output to control the slice level of the EFM signal.
7	LOCK	O	Issues "H" when the GFS signal is "H" by sampling with WFCK/16. If it is "L" consecutively 8 times, "L" is output.
8	VCOO	O	VCO output. f = 8.6436 MHz when locked to the EFM signal. (17.2872 MHz when replayed at the double speed.)
9	VCOI	I	VCO input
10	TEST	I	(0V)
11	PDO	O	Output of phase comparison between the EFM signal and VCO/2
12	Vss	—	GND (0V)
13	CLK	I	Input of clock from CPU to transfer serial data. Data is latched at the rise edge of the clock.
14	XLT	I	Latch input from CPU. The data (serial data from CPU) of the 8 bit shift register is latched to each register.
15	DATA	I	Serial data input from CPU
16	XRST	I	System reset input. "L" activates resetting.
17	CNIN	I	Input of tracking pulse
18	SENS	O	Issues internal status according to the address
19	MUTG	I	Muting input. When ATTM of the internal register A is "L", MUTG is "L", i.e. normal status. "H" activates no-sound status.
20	CRCF	O	Issues the output of CRC check result for the subcode Q.
21	EXCK	I	Clock input for serial output of subcode
22	SBSO	O	Serial output of subcode
23	SUBQ	O	Output of subcode Q
24	SCOR	O	Output of subcode sync S0 + S1
25	SQCK	I/O	Clock to read subcode Q.
26	SQEX	I	SQCK selection input (see the CPU interface for more detail.)
27	DOTX	O	Digital output ($\overline{\text{WFCK}}$ is output when DO is OFF.)
28	GFS	O	Output to indicate locked status of frame sync
29~32	TEST	I	Fix to "H" or "L". Don't make it open.
33	V_{DD}	—	Power supply (+ 5V)
34~40	TEST	I	Fix to "H" or "L". Don't make it open.
41~50	TEST	I	Fix to "H" or "L". Don't make it open.
51	C4M	O	Frequency division output of the crystal oscillator. f = 4.2336 MHz (8.4672 MHz when replayed at the double speed.)
52	Vss	—	GND (0V)
53	XTAI	I	Input to the crystal oscillator circuit. f = 8.4672 MHz or 16.9344 MHz by selecting mode. (16.9344 MHz when replaying at the double speed.)
54	XTAO	O	Output to the crystal oscillator circuit. f = 8.4672 MHz or 16.9344 MHz by selecting mode. (16.9344 MHz when replaying at the double speed.)
55	MD1	I	Mode select input 1
56	MD2	I	Mode select input 2
57	MD3	I	Mode select input 3
58	SLOB	I	Input to change the code of audio data output. When it is "L" or "H", 2's compliment output or offset binary output is issued, respectively.
59	PSSL	I	Input to change the mode of audio data output. When it is "L" or "H", serial or parallel output is issued, respectively.
60	APTR	O	Control output to correct aperture. "H" for R-ch.
61	APTL	O	Control output to correct aperture. "H" for L-ch
62	DA01	O	When PSSL = "H", DA01 (LSB of parallel sound data) is output. When PSSL = "L", C1F1 is output.
63	DA02	O	When PSSL = "H" or "L", DA02 or C1F2 is output, respectively.
64	DA03	O	When PSSL = "H" or "L", DA03 or C2F1 is output, respectively.
65	DA04	O	When PSSL = "H" or "L", DA04 or C2F2 is output, respectively.
66	DA05	O	When PSSL = "H" or "L", DA05 or C2FL is output, respectively.
67	DA06	O	When PSSL = "H" or "L", DA06 or C2PO is output, respectively.
68	DA07	O	When PSSL = "H" or "L", DA07 or RFCK is output, respectively.
69	DA08	O	When PSSL = "H" or "L", DA08 or WFCK is output, respectively.
70	DA09	O	When PSSL = "H" or "L", DA09 or $\overline{\text{PLCK}}$ is output, respectively.
71	DA10	O	When PSSL = "H" or "L", DA10 or UGFS is output, respectively.
72	DA11	O	When PSSL = "H" or "L", DA11 or GTOP is output, respectively.
73	Vcc	—	Power supply (+ 5V)
74	DA12	O	When PSSL = "H" or "L", DA12 or RAOV is output, respectively.
75	DA13	O	When PSSL = "H" or "L", DA13 or C4LR is output, respectively.
76	DA14	O	When PSSL = "H" or "L", DA14 or BCLK is output, respectively.
77	DA15	O	When PSSL = "H" or "L", DA15 or $\overline{\text{BCLK}}$ is output, respectively.
78	DA16	O	When PSSL = "H", DA16 (MSB of parallel sound data) is output. When PSSL = "L", DATA is output.
79	WDCK	O	Strobe signal output. When DF is ON, the frequency is 176.4 kHz (352.8 kHz when replayed at the double speed). When DF is OFF, it is 88.2 kHz (176.4 kHz when replayed at the double speed).
80	LRCK	O	Strobe signal output. When DF is ON, the frequency is 88.2 kHz (176.4 kHz when replayed at the double speed). When DF is OFF, it is 44.1 kHz (88.2 kHz when replayed at the double speed).

MC-1000/1000L (CD & Deck Section)

Terminal Function <CXP1001AQ>

Pin No.	Pin Name	I/O	Function	I/O Format
1	—		OPEN	
2	MUTE	O	MUTE is ON with mute output in "H". It is connected to MUTG ⑲ of CXD 1167.	Output of pull-up resistance
3, 4	—	I	Connected to Vss.	
5	SQCK	O	Output of clock for reading subcode Q. It is connected to SQCK ㉘ of CXD1167.	3-state output
6, 7	—		OPEN	
8	SUBQ	I	Data input of subcode Q. It is connected to SUBQ ㉙ of CXD 1167.	Schmidt Inverter input
9	REMAIN	I	REMAIN (remaining time) indication switching input KEY is connected.	Inverter input
10	OPEN	I	Connect the OPEN/CLOSE detection switch on the lid of the CD player and adjust it to open upon "L".	
11	—		Connected to Vss.	
12	FOK	I	Enter whether focusing is OK. It is connected to FOK ㉘ of CXA1081.	Inverter input
13	CUE	I	Connect ▷▷ KEY.	
14	SEV	I	Connect ◁◁ KEY.	
15	MEMORY	I	Connect MEMORY KEY.	
16	REPEAT	I	Connect REPEAT KEY.	
17	PLAY	I	Connect ▷/II (PLAY/PAUSE) KEY.	
18	STOP	I	Connect ■ (STOP) KEY.	
19	FFS	I	Connect ▷▷I KEY.	
20	FRS	I	Connect I◁◁ KEY.	
21	TEST	I	Enter TEST mode.	
22	—		Connected to VDD.	
23	EMPHASIS	O	Emphasis output. "H" when emphasis is ON. Connected to the analog audio system.	3-state output
24	SENS	I	Sense input (various system monitor) terminal. Connected to SENS ⑱ of CXD1167 and ⑱ of CXA1082.	Inverter input
25	Vss		Vss terminal	
26	—	I	Connected to VDD.	
27	XRST	O	System reset output. Connected to XRST ⑯ of CXD1167 and ㉒ of CXA1082.	3-state output
28	CLK	O	System control clock output. Connected to CLK ⑬ of CXD1167 and ㉓ of CXA1082.	
29	XLT	O	System control latch output. Connected to XLT ⑭ of CXD1167 and ㉔ of CXA1082	
30	DATA	O	System control data output. Connected to DATA ⑮ of CXD1167 and ㉕ of CXA1082.	
31 ∫ 50	SEG19 ∫ SEG0	O	For the drive output (segment) indication pattern of the liquid crystal display (LCD), see the attached sheet.	Segment output
51	—		OPEN	
52 ∫ 54	COM2 ∫ COM0	O	For the drive output (common) indication pattern of the LCD, see the attached sheet.	Segment output
55 ∫ 57	VLC1 ∫ VLC3		Terminal to supply bias voltage for the LCD	
58	VDD		VDD terminal	
59	VL		Terminal to supply bias voltage for the LCD	
60	—		OPEN	
61	C4M	I	4.2336 MHz clock input terminal. Connected to ㉑ C4M of CXD1167.	Clock input
62	$\overline{\text{RESET}}$	I	Reset input	Reset
63	—		Connected to Vss.	
64	SCOR	I	Subcode sync (SCOR) input. Connected to SCOR ㉔ of CXD1160.	Schmidt inverter input

• CXA1081M <RF Amp.>

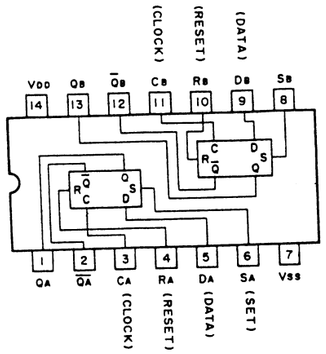


♦ Terminal Function <CXA1081M>

Pin No.	Pin Name	I/O	Description
1	RFI	I	RF summing amplifier input.
2	RFO	O	RF summing amplifier input.
3	RF ⊖	I	RF Summing amplifier feedback signal input.
4	P/N	I	Terminal for switching P-sub/N-sub of LD (laser diode).
5	LD	O	APC LD amplifier output.
6	PD	I	APC PD amplifier input.
7	PD1	I	RF I-V amplifier (1) inverting input. This terminal is connected to the pin diode (A + C).
8	PD2	I	RF I-V amplifier (2) inverting input. This terminal is connected to the pin diode (B + D).
9	VC	—	Ground
10	F	I	F I-V amplifier inverting input. This terminal is connected to the pin diode (F).
11	E	I	E I-V amplifier inverting input. This terminal is connected to the pin diode (E).
12	EO	O	E I-V amplifier output.
13	EI	I	E I-V amplifier feedback input.
14	VR	O	(VCC + VEE)/2 voltage output.
15	CC2	I	Defect amplifier bottom hold input. This terminal is connected Pin 16 with a coupling capacitor.
16	CC1	O	Defect amplifier bottom hold output.
17	VEE	—	Negative supply voltage: −5V.
18	FEBIAS	I	Bias terminal for the focus error amplifier non-inverting.
19	FE	O	Focus error amplifier output.
20	TE	O	Tracking error amplifier output.
21	DEFECT	O	Defect comparator output.
22	MIRR	O	Mirror comparator output.
23	CP	I	Mirror comparator non-inverting input. This terminal is connected a mirror hold capacitor.
24	CB	I	This terminal is connected a defect bottom hold capacitor.
25	DGND	—	Ground.
26	ASY	I	Auto asymmetry buffer control signal input.
27	EFM	O	EFM comparator output.
28	FOK	O	FOK comparator output.
29	$\overline{\text{LD ON}}$	I	Laser diode ON/OFF switching input.
30	VCC	—	Positive supply voltage: +5V.

MC-1000/1000L
(CD & Deck Section)

• **µPD4013BC/TC4013BP/MB84013BM <Dual D Type Flip-Flop>**

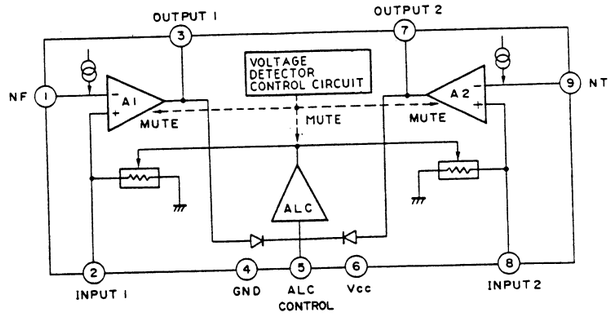


INPUTS				OUTPUT	
CLOCK	DATA	SET	RESET	Qn+1	$\overline{Qn+1}$
↑	L	L	L	L	H
↑	H	L	L	H	L
↓	X	L	L	Qn	$\overline{Qn}$
X	X	L	H	L	H
X	X	H	L	H	L
X	X	H	H	L	L

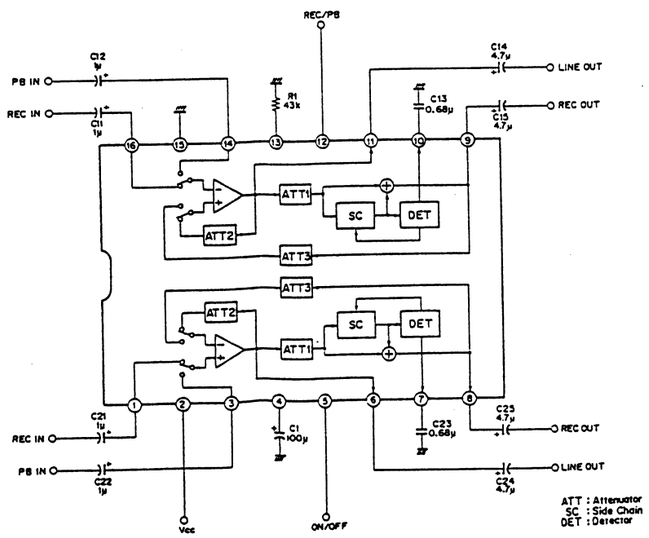
H: High Level
L: Low Level
X: Don't Care

Qn : Present State
Qn+1: Next State

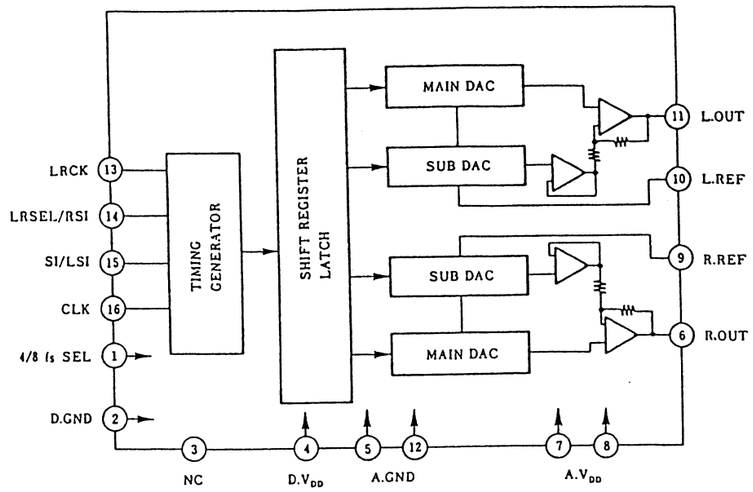
• **BA3308 <Pre-Amp.>**



• **CXA1101P <Dolby Noise Reduction>**



• **µPD6376GS <D/A Converter>**

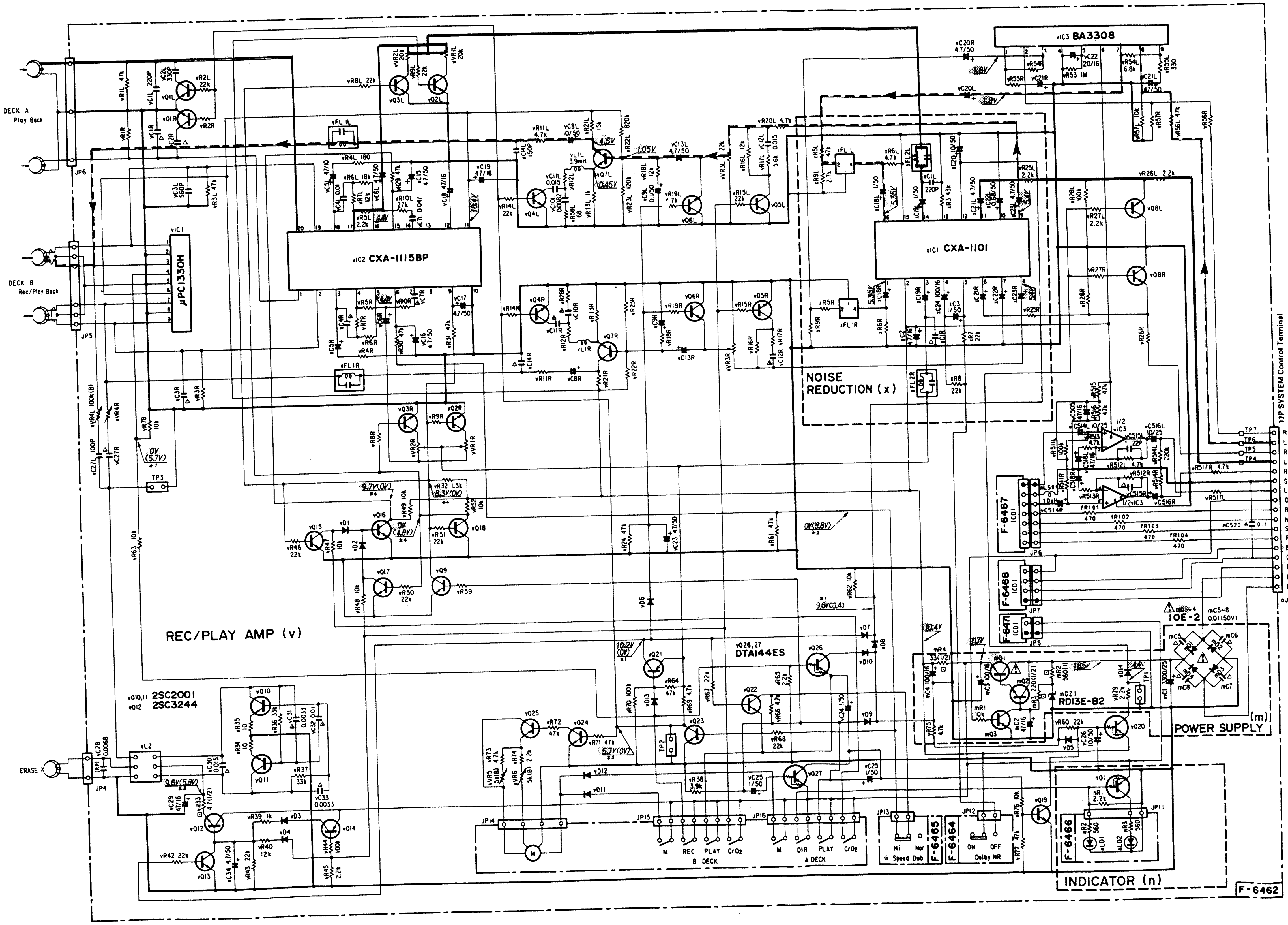


A B C D E F G H

12. SCHEMATIC DIAGRAM

12-1. DECK SECTION

* Design and specifications subject to changes without noitice for improvements.



SYMBOL OF FUNCTION
(m) POWER SUPPLY
(n) INDICATOR
(v) REC/PLAY AMP
(x) NOISE REDUCTION
(f)

vQ1~9, 12, 13, 15~19, 22~24
2SC2458
vQ14, 21, 25
2SA1048
vD1~10, 13, 14
1SS133

RESISTORS
Are in ohms, 1/6 Watts, ±5% Tolerance
Unless Otherwise Noted k: kΩ, M: MΩ

CAPACITORS
Are in µF, Unless Otherwise Noted. P: pF
ELECTROLYTIC CAPACITORS
Capacitance (µF) / Volt (V)

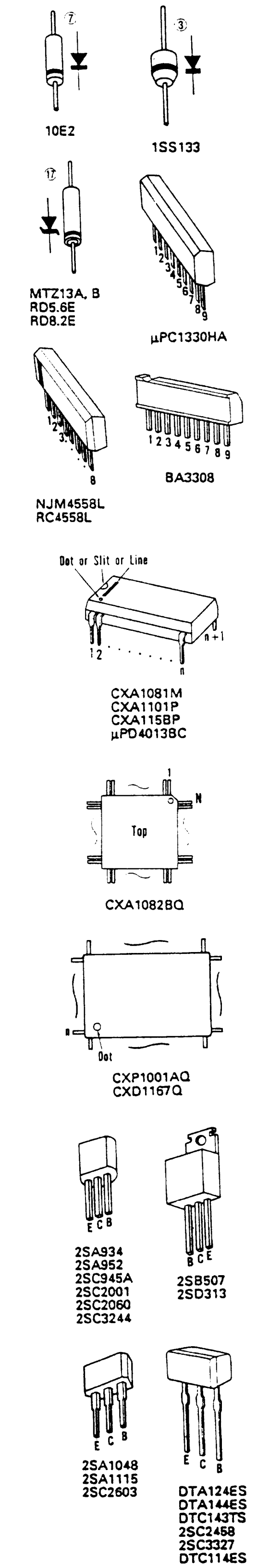
Each D.C Voltage shows the nominal value in volts at stop.

⚠ is Safety Part.
Use only reprocement parts recommended by the manufacturer

SYMBOL
△ Ceramic Capacitor
◎(m) Mylar
△ Barrier Layer Capacitor
⊡ Non-Inflammable Resistor

✱1 ( ): REC
✱2 ( ): HIGH SPEED
✱3 ( ): NORMA TAPE(B REC)
✱4 ( ): A PLAY

mQ1
2SD313
mQ2,3
2SC2458
vQ20, nQ1
DTA144ES

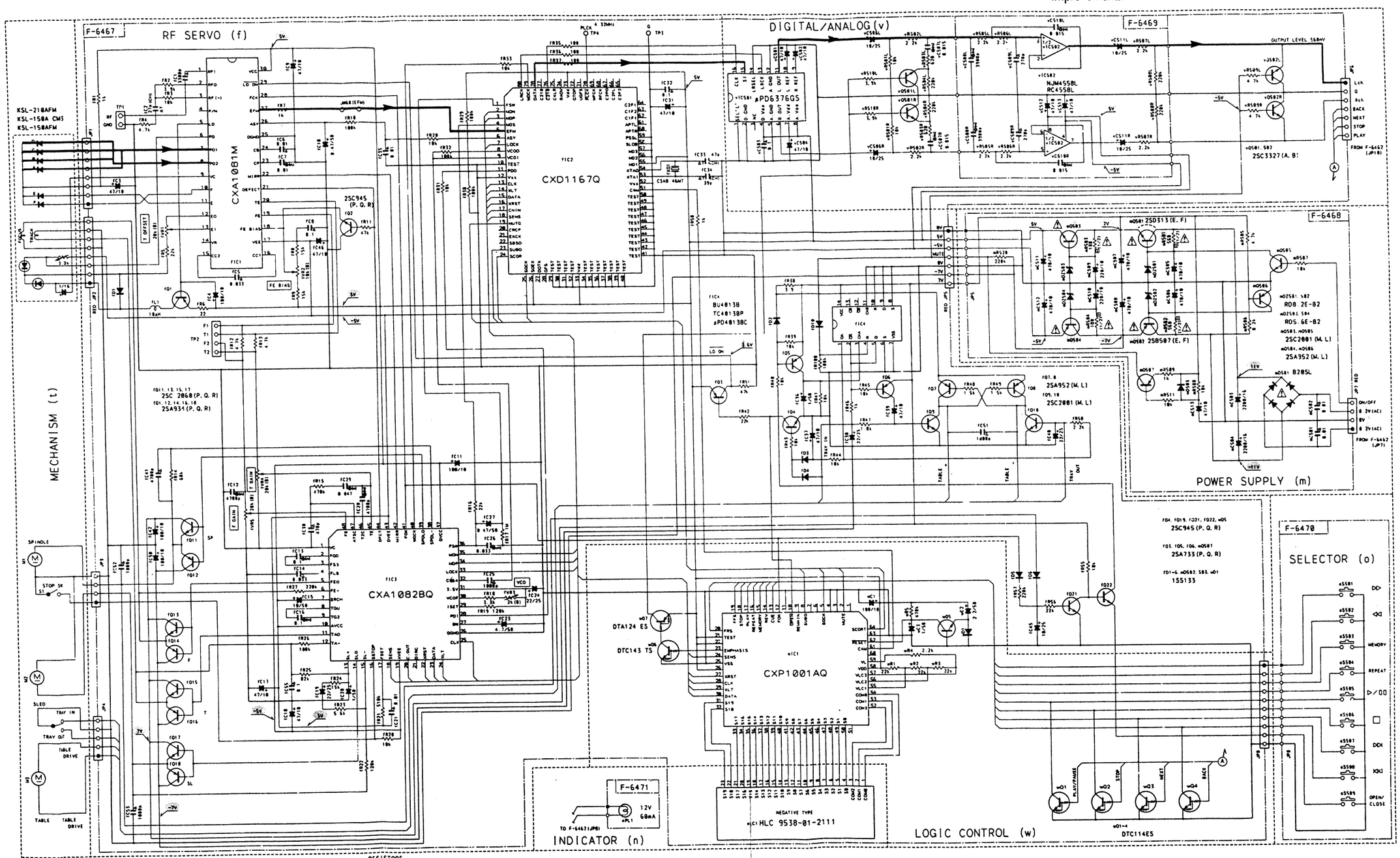


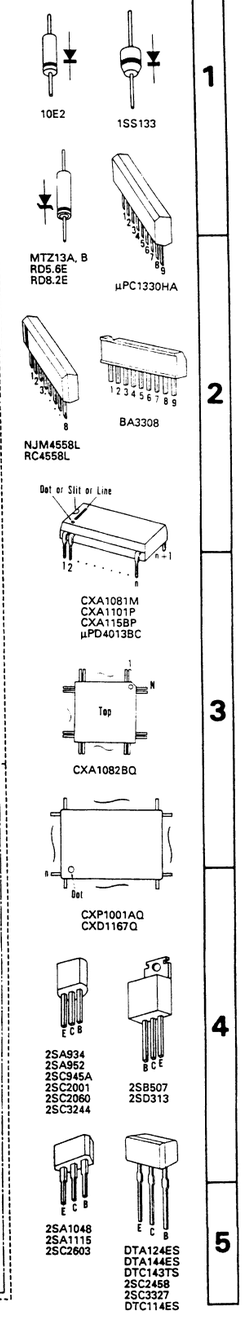
1 2 3 4 5

——— PLAY Signal Line
– – – – – REC Signal Line

12-2. CD Section

* Design and specifications subject to changes without noitice for improvements.





SYMBOL OF FUNCTION
- (f) RF SERVO
- (m) POWER SUPPLY
- (n) INDICATOR
- (o) SELECTOR
- (t) MECHANISM
- (v) DIGITAL/ANALOG
- (w) LOGIC CONTROL

SYMBOL
- △ Ceramic Capacitor
- △T Ceramic (Temperature Compensation)
- ◎Mat Mylar
- ◬ Barrier Layer Capacitor
- ⊡ Non-Inflammable Resistor

⚠ is Safety Part. Use only replacement parts recommended by the manufacturer.

RESISTORS
Are in ohms, 1/6Watts, ±5% Tolerance
Unless Otherwise Noted k kΩ, M MΩ
TOLERANCE G: ±2% F: ±1%

CAPACITORS
Are in μF, Unless Otherwise Noted p pF

ELECTROLYTIC CAPACITORS
Capacitance (μF)/Volt (V)

Each D.C. Voltage shows the nominal value in volts at play

——— Signal Line

SANSUI ELECTRIC CO., LTD.: New River Bldg. 10-14, Shinkawa 1-chome, Chuo-ku, Tokyo 104, Japan
PHONE: (03) 5566-1024 / FAX: 03-5566-1027 (International Division)
SANSUI USA INC.: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
SANSUI DEUTSCHLAND G.M.B.H.: Paul-Ehrlich-Strasse 8, 6074 Rödermark 2, West Germany
山水電気株式会社 東京都中央区新川1-10-14 (〒104)

(SM2-198) Printed in Japan (1990.09.C) <Stock No. 36554100>

SANSUI

SERVICE MANUAL

MC-1000/L

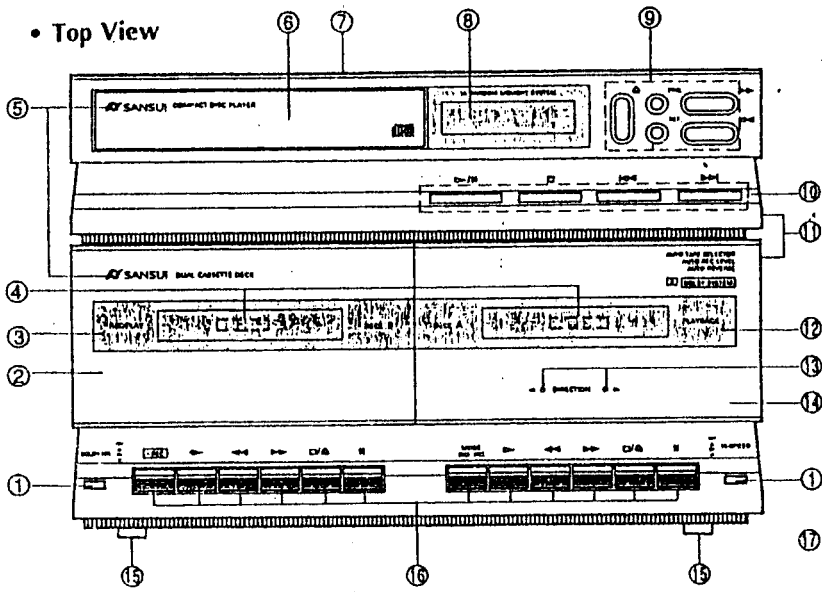
(Black Model)

MINI COMPONENT SYSTEM
<CD & CASSETTE DECK SECTION>

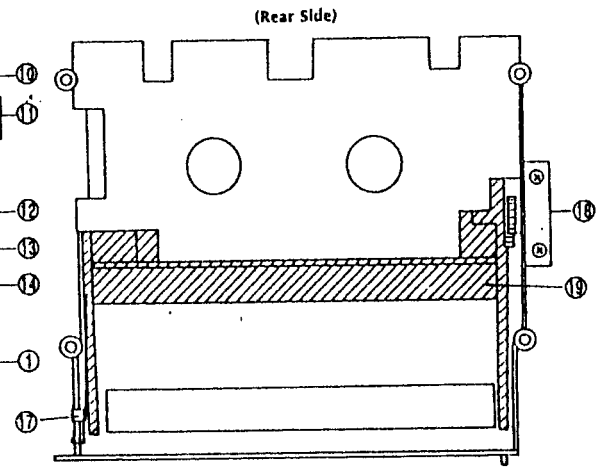
For servicing MC-1000 & 1000L<Black Model>(CD & Cassette Deck Section), please refer to service manual for the MC-1000/L<Gray Model>(CD & Cassette Deck Section) with this manual, since most of the parts and circuit employed in MC-1000/L(Black Model>(CD & Cassette Deck Section) are in Common with the MC-1000/L<Gray Model><CD & Cassette Deck Section)
On the parts list, the changed parts are specified by "●" mark on top of the Stock No.

PARTS LIST OF SET

• Top View



• Cassette Holder



Parts List

Prts No.	Stock No	Description
1	● JS85057000	Push Knob
2	● JS85057400	Cassette Door(L)
3	● JS85056700	Cassette Window(L)
4	JS83274200	Mirror Sheet
5	JS85022000	Logo Badge
6	● JS85057700	Tray Panel Cover
7	● JS85057800	Bonnet
8	● JS85056900	Display Window
9	● JS85057200	Knob, ▷▷ ◁◁ etc.
10	● JS85057300	Knob, ▷▷| |◁◁ etc.

Parts No.	Stock No.	Description
11	● JS85057600	Front Panel
12	● JS85056800	Caassette Window,R
13	JS84642100	Indicator
14	● JS85057500	Cassette Door(R)
15	JS84642500	Leg Sheet
16	● JS85057100	Cassette Knob
17	2007079902	Spring
18	2000001065	Damper
19	JS85009100	Cassette Holder

SANSUI

SANSUI ELECTRIC CO., LTD.: New River Building, 10-14, Shinkawa 1-chome, Chuo-ku Tokyo 104, Japan
PHONE: (03)5566-1024 FAX: (03)5566-1027 (International Division)
SANSUI USA INC.: 1290 Wall Street West, Lyndhurst, New Jersey 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
SANSUI DEUTSCHLAND GMBH: Paul-Ehrlich-Strasse 8, 6074 Rödermark 2, F.R. Germany
山水電気株式会社 東京都中央区新川1-10-14 (〒104)

(SM2-281) Printed in Japan (1991.07.W)
* This manual is not stocked.(454)